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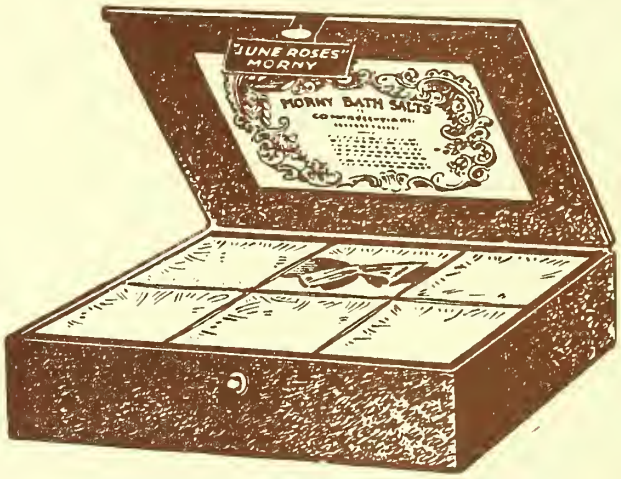
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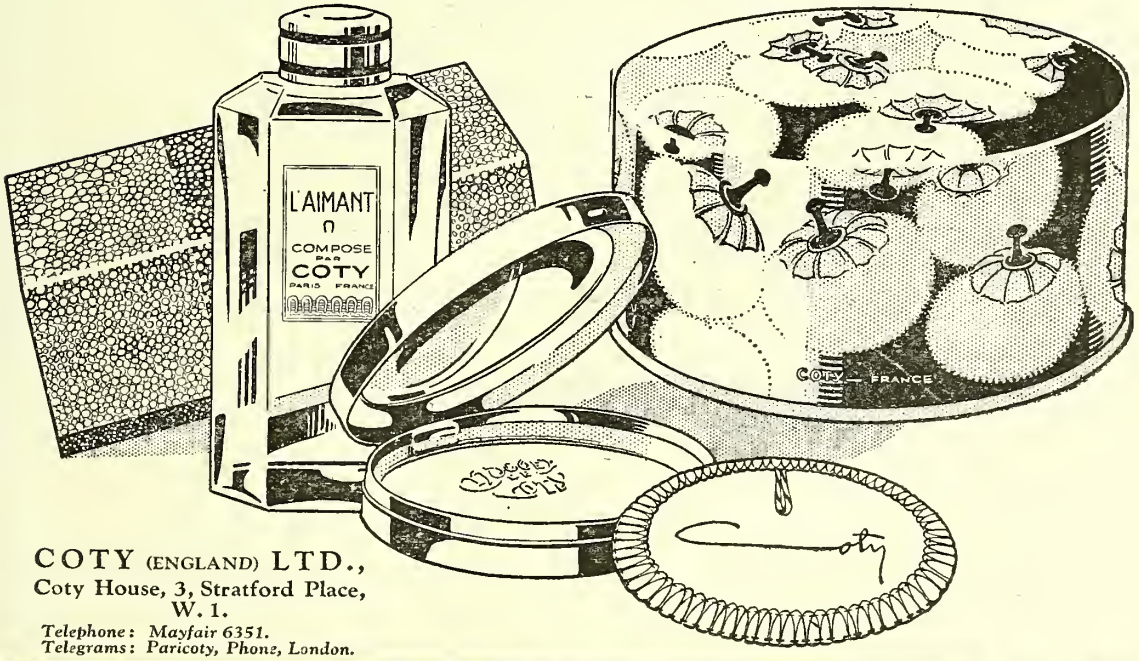
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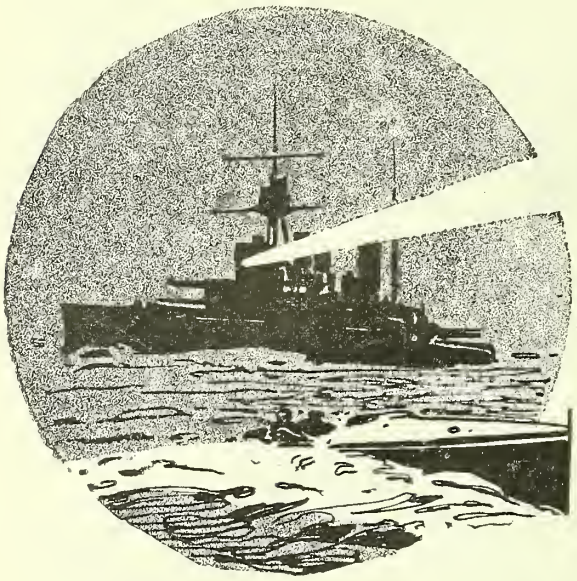
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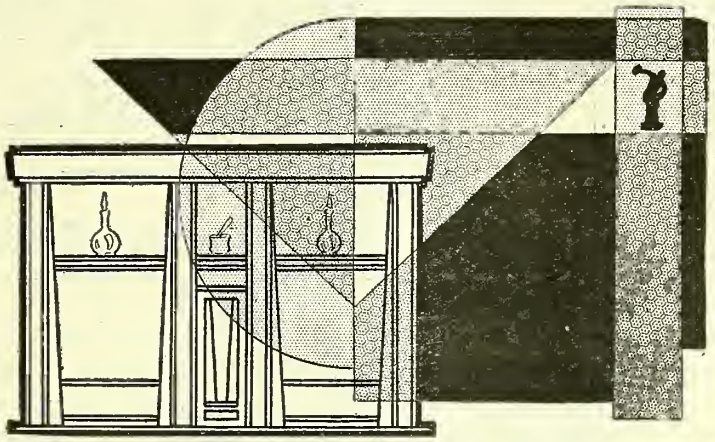
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M.C.41

Maw's Page



THE MODERN TOUCH

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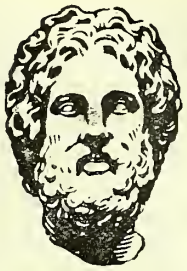
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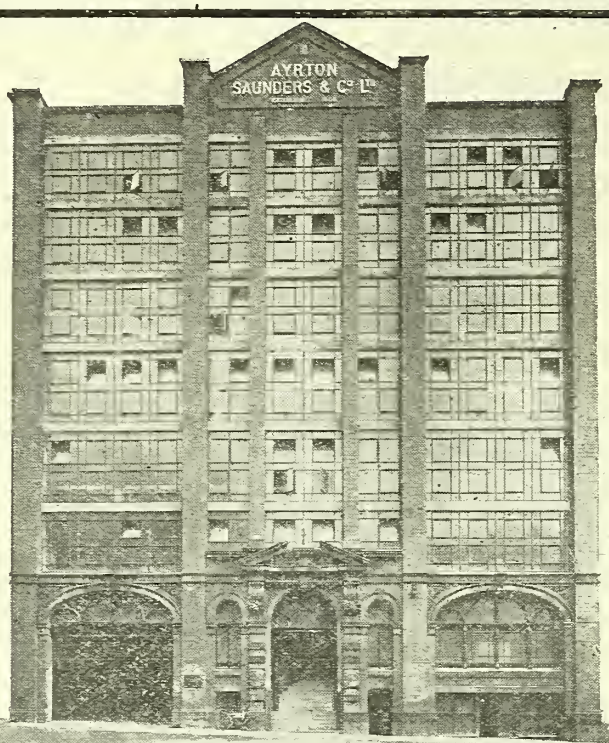
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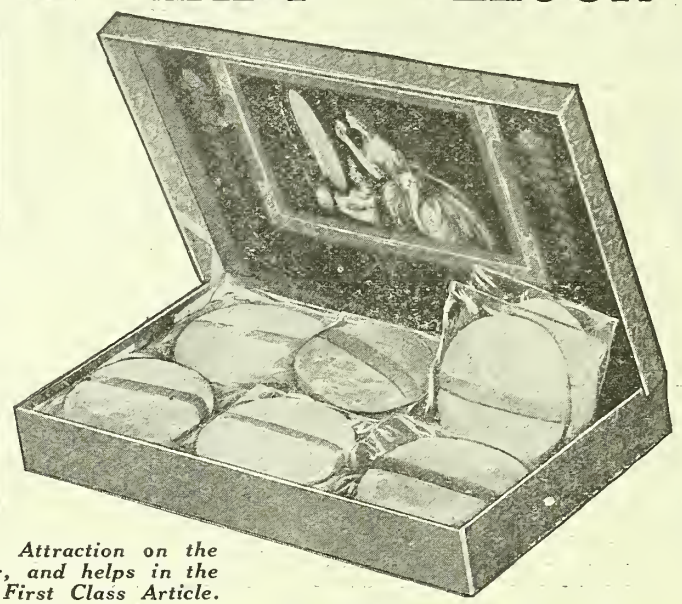
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FINAL ANNOUNCEMENT

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JULY 1st 1930

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Mr. W. Giles of Glasgow
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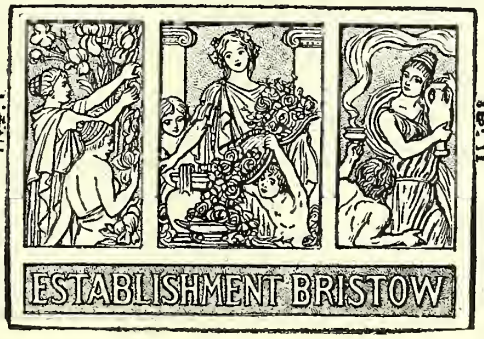
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50 Beak Street, London, W.1.



Place this box where your customers can see it.



Big advertisements are now appearing, telling the public to look for this box. They will do so, because the box itself is attractive, and because "Ashes of Roses" is easily the most favoured miniature Perfume.

1/-

Ashes of Roses

BOURJOIS — PARIS

Vanity Bag Bottles

BONUS OFFER Get the benefit of this big advertising—and of our special extra-profit offer. All you have to do is to display the box. Full particulars on application to :—

A. BOURJOIS et CIE., LTD., 4, Water Lane, London, E.C.4
PARIS, NEW YORK, SYDNEY, WELLINGTON.

B B

It is so Refreshing!



Frozoclone

THE ORIGINAL SOLID EAU de COLOGNE

Frozoclone REGD

is the Original Solid Eau de Cologne

THIS NEW SHOWCARD IS READY FOR YOU

Beautifully produced in colour.

It will appeal to your customers and assist in promoting sales of this well-known preparation.

■ ■ ■ ■ ■ ■

WARNING!

Imitations have been produced under a similar name and style of packing, closely resembling Frozoclone *in outward appearance only*, with the object of misleading the public. Proceedings have been taken, and always will be rigorously pursued against all such imitations.

Retail P.A.T.A. 3s. 6d. & 2s. 0d.

Per doz. 32s. 0d. „ 18s. 0d.

SOLID LAVENDER WATER

in Wedgwood Blue Frosted Bottles, size and prices as Frozoclone.

R. Demuth's Laboratories

68 Salusbury Road & Montrose Av.

LONDON, N.W.6

'Phone: Maida Vale 5340.

MIRADOS

Reg^{d}

■ ■ ■ ■ ■ ■

A SCIENTIFIC PREPARATION FOR THE ALLEVIATION AND PREVENTION OF INSECT STINGS

■ ■ ■ ■ ■ ■

It is rapidly absorbed, and leaves a protective non-greasy film. Will not stain the clothes. Should be applied to neck, wrists and all exposed parts.

■ ■ ■ ■ ■ ■

MIRADOS has the approval of the most eminent Research Laboratory for tropical diseases. It is effective both for prevention and alleviation.



Retail - 1s. 9d. P.A.T.A.
Wholesale 14s. 0d. doz.

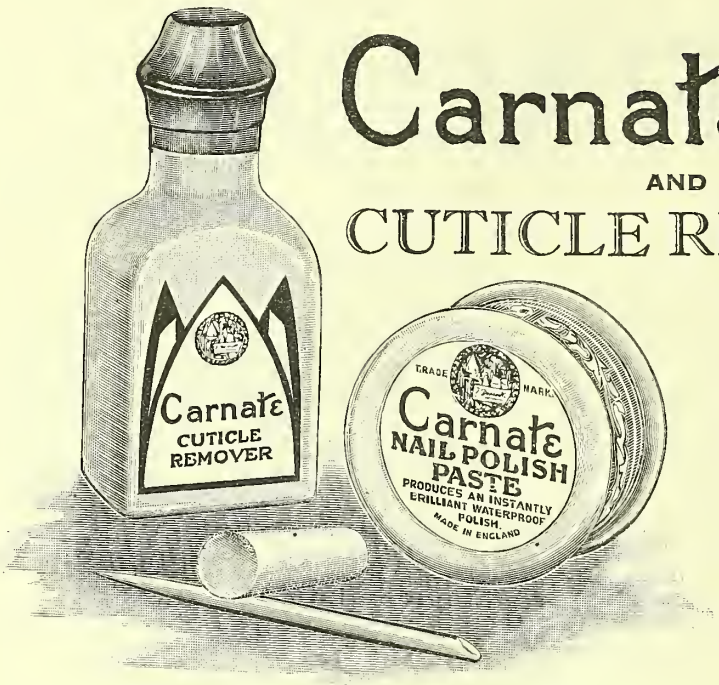
ARTISTIC CUT-OUT SHOWCARDS IN COLOUR, to hold one bottle, available on application.

We are open to appoint Agents in the Tropics and Colonies (except South Africa)

R. Demuth's Laboratories

68 Salusbury Road & Montrose Avenue
London, N.W.6

'Phone : Maida Vale 5340



Carnate

The elegant NAIL POLISH

AND

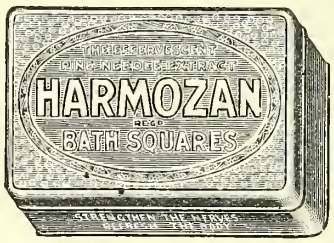
CUTICLE REMOVER

A new introduction as a Companion to Carnate.

ARTISTIC SHOWCARDS ARE AVAILABLE. WRITE FOR A SUPPLY.

CARNATE RETAILS at 1/9 P.A.T.A.
Per doz. 15/-

CARNATE CUTICLE REMOVER RETAILS 1/9 P.A.T.A.
Per doz. 14/-

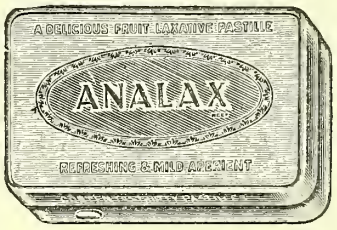


HARMOZAN

A coniferous Bath preparation possessing peculiarly powerful restorative properties in compressed form. Enables the effervescent Pine Baths of famous continental spas to be reproduced in the home.

RETAIL - - **3s. 9d. & 2s. 0d.** per box P.A.T.A.

Per doz. **30s. 0d. 16s. 0d.**



ANALAX

The Ideal Fruity Laxative in Pastille form.

Delicious, reliable, effective.

RETAIL **2s. 3d.** P.A.T.A. **Per doz. 21/-.**

R. Demuth's Laboratories

68 Salusbury Road and Montrose Avenue London, N.W.6

Now Ready!

June

VANISHING CREAM

IN 6D TUBES



TRADE PRICE

4/-

DOZEN

In Display Containers of One Dozen Tubes in Individual Cartons.

This new packing for June Vanishing Cream has been produced in response to many trade requests. It meets a definite need and commands a ready sale. The display container is dainty and attractive, and the generous value offered ensures steady demand. Ample supplies are ready for immediate delivery. Send an order to-day.

COLD CREAM TOO.

We also supply the popular "June" Cold Cream in a packing uniform with the above in style and price.

Saville's June Perfumery

SAVILLE PERFUMERY LTD.,
JUNE LABORATORIES, WATFORD, HERTS.

DEARBORN (1923) LTD.

37 Gray's Inn Road, London, W.C.1

Telephone: HOLBORN 9669

Toilet Specialties.

	Price per doz. to Retailer	Selling Price P.A.T.A
PILENTA SOAP .. .. A complexion soap.	10/-	1/-
PROLACTUM .. .. For the lips.	10/-	1/-
PARSIDIUM JELLY .. For wrinkles.	10/-	1/-
ALLACITE OF ORANGE BLOSSOM .. .. A dressing cream.	22/6	2/6
BORANIUM .. .. A hair tonic.	22/6	2/6
CLEMINITE .. .. For a face lotion.	22/6	2/6
COLLIANDUM (Powder & Solide.) For a face tint.	22/6	2/6
PERGOL .. .. .. A deodorant.	22/6	2/6
TEKKO PASTE .. .. Camphor cream.	22/6	2/6
STALLAX .. .. For a shampoo.	13/6 22/6	1/6 2/6
JETTALINE .. .. For clearing the skin.	31/6	3/6
PHEMINOL .. .. A depilatory.	36/-	4/-
MENNALINE .. .. For the eyelashes.	36/-	4/-
MERCOLIZED WAX .. A face cream.	18/- 31/6	2/- 3/6
STYMOL .. .. For oily complexions and blackheads.	36/-	4/-
SILMERINE .. .. Hair-curling fluid.	22/6	2/6
BARSYDE .. .. Dandruff eradicator.	22/6	2/6
TAMMALITE .. .. For grey and faded hair.	22/6	2/6
LIQUID PERGOL .. .. To check excessive perspiration locally.	31/6	3/6
BICROLIUM .. .. For whitening the hands.	22/6	2/6
COCONOIDS .. .. For figure development.	31/6	3/6
SIPOLITE .. .. A new depilatory.	18/-	2/-

The Products of

Messrs. PARKER, BELMONT & CO.

CLYNOL BERRIES .. For obesity.	36/-	4/-
SOFT PALERIUM .. For wrinkles.	45/-	5/-
LIQUID NAIL POLISH .. Brilliant and lasting.	10/-	1/-

Stocked by ALL Wholesale Houses.

FOREIGN AND COLONIAL DEPÔTS AND AGENCIES.

South Africa: LENNON, LTD., Cape Town, etc.
SIVE BROS., & KARNOVSKY, LTD., Johannesburg.
India: FRAMJEE & SON, Bombay.
A. L. CHOUDRY, Calcutta.
New Zealand: SHARLAND & CO., Auckland and Wellington.
Irish Free State: MAY, ROBERTS & CO., LTD., Dublin.

SPECIAL OFFER

by

The Bûtywave Co.

10 TACHBROOK ST., VICTORIA, LONDON, S.W.1

To introduce the new gumless Hair Fixative for Men—

"SET"

we are offering the following special bonus parcel of quick selling lines :—

With each parcel of BŪTYWAVE preparations made up as follows, there will be given FREE ¼-dozen SET.

	Cost	Sell
4-dozen 6d. Butywave Shampoo (13 *supplied as* 1 *dozen*)	16 0	1 6 0
½-dozen 1/9 Butywave	4 0	5 3
¼-dozen 2/6 Hair Waving and Setting Lotion	5 6	7 6
FREE ¼-dozen 1/6 SET		4 6
	1 5 6	
Less 10% *discount for cash in* 30 *days*	2 6	
	£1 3 0	£2 3 3

PROFIT 20/3 Equal to 47% on turnover—88% on cost.

As each bottle of SET retails for 1/6, **this is a present of 4/6 worth of goods.**

SET is the perfect Fixative. No Gum, No Oil, No Grease

Order your Bonus Parcel NOW!



IF IT SHAVES IT'S WANIE

The Blade that SELLS as it SHAVES—

"LIKE GREASED LIGHTNING!"

Obtainable from all leading Wholesalers.

FREE SAMPLE ON REQUEST.

Dept. C.D., WANIE DISTRIBUTING Co., 89 Aldgate High St., E.C.3
North'n Distributors: S. KALISKY (Aldgate) Ld., 16 Withy Gv., Manch't'r.
Irish Free State Agents:
Messrs. W. A. FREEDMAN & CO., 21 Merchant's Quay, DUBLIN.

HAIR

BURMAN

CLIPPERS

The British-Made Hair Clipper.



For SURGICAL and VETERINARY PURPOSES.

Dainty Shingling Clippers for Ladies' use.

HAIRDRESSERS' CLIPPERS

BURMAN & Sons, Ltd., BIRMINGHAM

A. S. LLOYD'S

EUX-E-SIS

For Shaving without Soap, Water or Brush

CAUTION to the TRADE

Labels on the genuine EUXESIS not only bear signature of A. S. Lloyd in Black Ink, but also "Prepared only by his Widow" and signature of 'Aimée Lloyd' in RED.



Tubes 1/6 & 3/- ~ 33⅓% Profit

SOLE MANUFACTURERS & PROPRIETORS:

AIMÉE LLOYD & CO. LTD

23 PANTON STREET
HAYMARKET, LONDON, S.W.1

N.B.—When ordering from Wholesale Houses write LLOYD'S EUXESIS (WIDOW'S).

"ABUNE THEM A'."

H.B.T.

ASEPTIC TOILET

AND

SHAVING SOAPS

THE LAST WORD IN SOAP CULTURE

MADE WITH THE EXPRESSED JUICES OF

LIVING PLANTS

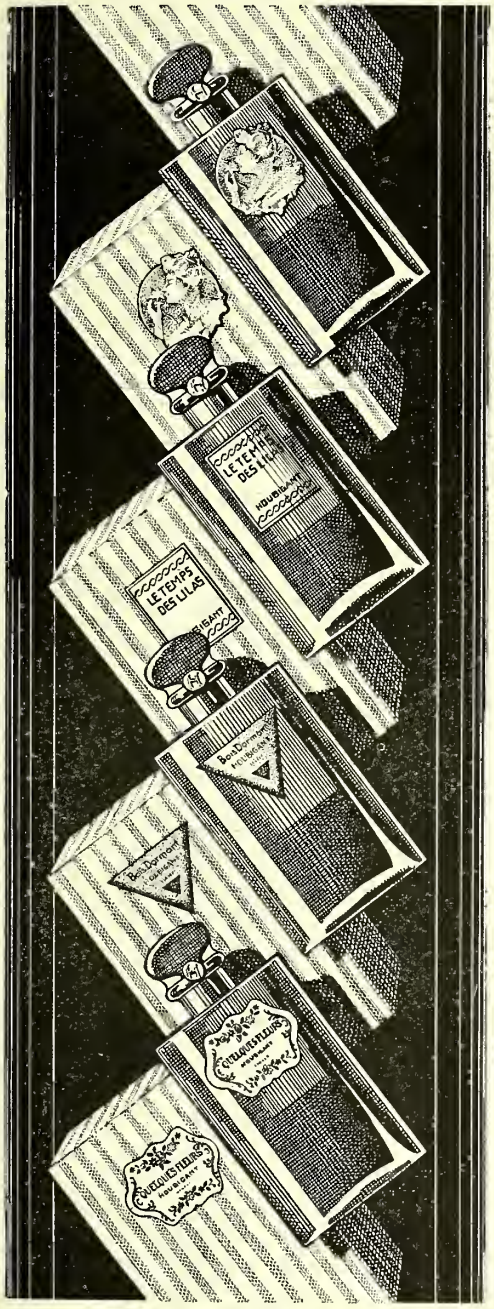
THE SOAP WITH NO SOAPY TASTE

From all Wholesale Houses

HUNTER BEATTIE

MONTEITH ROW - - GLASGOW, S.E.

B.C.M./H.B.T.



LARGELY INCREASED SALES AWAIT THE RETAILER WHO IS PREPARED

HOUBIGANT INTRODUCE THEIR MOST FAMOUS PERFUMES IN A COMPLETELY NEW SERIES RETAILING AT 3/3.

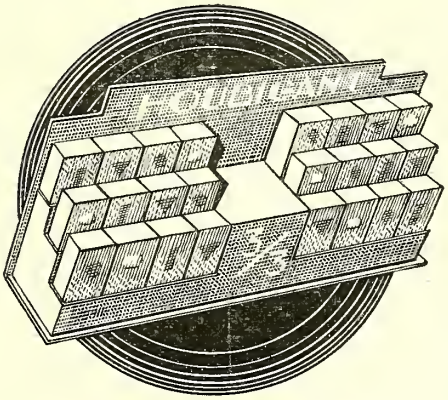
The famous perfumes "BOIS DORMANT", "QUELQUES FLEURS", "LE TEMPS DES LILAS", "LE PARFUM IDÉAL" are now within the purchasing possibility of a larger public.

Don't miss sales. Stock with confidence and tell all your customers about it.

AN ARTISTIC STAND for 24 perfumes is supplied FREE with orders. Display it in your window or counter - or both - where it can be seen, and you will sell automatically.

Don't fail seeing our Representative when he calls; he will make you an interesting proposition.

All 4 perfumes to retail at one price 3/3



HOUBIGANT

PARIS

Larden Road PARFUMERIES DE PARIS Ltd. Acton-London

BEAUTIFUL FACE CLOTHS
DAINTY & ATTRACTIVE



Will not stretch like knitted cloths

The MERMAID label is a guarantee of quality. You can recommend MERMAID without qualification. British throughout. Put the inviting display carton on your counter; it will soon empty itself.

INSIST ON MERMAID —— THE BETTER FACE CLOTH

THE MERMAID RANGE:			
No. 0	White	4/- dozen	(2 dozen in Carton)
No. 1	Tinted	4/9 ,,	(2 ,, ,, ,,)
No. 2	White	5/3 ,,	(2 ,, ,, ,,)
No. 3	White	6/9 ,,	(1 ,, ,, ,,.)

Obtainable from Leading Wholesale Houses.

SPENCER BROS., 39 & 40 Shoe Lane, London, E.C.4

Telephone: Central 3469. (Wholesale and Export Only.) *Telegrams: "Sachapuff, Lud," London.*

The Public are Calling
for
PETAL DUST
"Wherein the subtle savour of the Flowers sublimely dwells."

THE GREAT FLORAL AIR PURIFIER

A Trial will convince you that——

PETAL DUST, when once shown, creates its own demand, and is therefore a valuable adjunct to every "go-ahead" store.

PETAL DUST, when displayed prominently upon your counter, will attract prudent customers by the fragrance of its unique odour, which to-day is of such universal admiration.

Retails in packets at 4d. and 8d. each.

Attractive Advertising matter free on request.

Obtainable through all the usual Wholesale Houses or from Sole Producers:—

The Rosmarine Manufacturing Co.
LONDON, S.E.1.

GOSNELL'S
ORIGINAL
Cherry Tooth Paste



IN TUBES
10d. & 1/3



IN POTS
1/6 & 2/-

Cherry Blossom Toilet Powder

JOHN GOSNELL & CO., LTD.
Perfumers and Fine Soap Makers
211-215, Blackfriars Rd., S.E.1
LONDON
Established 1760

ALWAYS A SOURCE OF INTEREST

❋ ❋ ❋

Remarkable Profits made from Pennies



TO catch the eye of the passer-by, to remind them of their doctor's injunction "weigh yourself regularly." To attract them to your shop, and to increase your trade while paying for itself—that is the duty of this handsome machine.

The neat and elegant design, with a lustrous mahogany finish, and chromium plating, is certain to attract many, ensuring a positive and steady source of income, collecting pennies and attracting new custom.

★

Write for our System of Extended Payments.

AUTOWAY CO.

Weighing Machine Manufacturers

13 WELLINGTON STREET, GLASGOW.
LONDON :: 51 FARRINGDON ROAD, E.C.1
MANCHESTER :: :: 172 CHAPEL STREET.

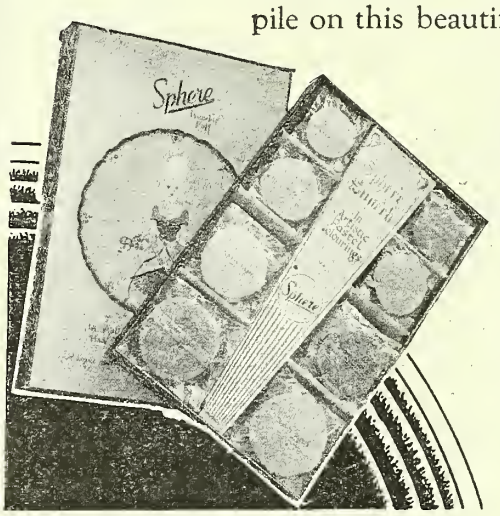
Also at :

Liverpool, Sheffield, Leeds, Newcastle, Leicester, Nottingham, Northampton, Cardiff, Portsmouth, Belfast, Dublin.

A HANDSOME INFANT BALANCE IS GIVEN GRATIS WITH EVERY AUTOWAY.

SPHERE
SUPERB POWDER PUFF

A new Puff made of Sylkie-down Velour. The pile on this beautiful puff is produced in such a way as to retain just sufficient powder to enable the user to apply it smoothly and evenly, without streaks, as is the case with coarser materials.



Supplied in assorted colours and sizes.

ATTRACTIVE DISPLAY BOX.

No. PF 50 as illustrated, 2 doz. in a box ... **6/6** per box.

Assorted Six Puffs each 2", 2½", 2¾", and 3¼" to the box.

Wholesale only:
FAIRE BROS. & Co., Ltd., Leicester.

The demand for Nuctone is increasing rapidly.

Every week, every month, more and more women are insisting on the Nuctone method of banishing grey hair—both at their hairdresser's, *and for use at home too.* For Nuctone, they know, is guaranteed safe. *You* know that Nuctone contains no poisonous ingredients and that it gives back the natural colour of the hair merely by *developing* it. Here is your chance! A tremendous advertising campaign has told women that their old prejudices about hair tinting are absolutely out-of-date, that the new method, Nuctone, never makes the hair look "dyed." Think how many women will want to treat their own hair at home with Nuctone. *Your* customers are among them. Be ready with a stock of Nuctone!

NUCTONE
FOR GREY HAIR

4 Grades — Nuctone Eclaire, Eclaire Concentre, Nuctone and Nuctone Concentre.

3/9 per bottle, 32/- per dozen.
6/6 per bottle, 52/- per dozen.

ARTWITE banishes yellow tinges from grey or white hair - - **66/- per dozen.**

Order through your usual wholesaler, or from

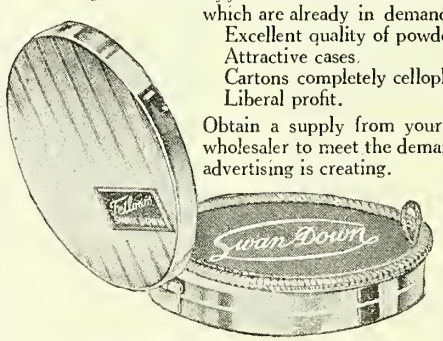
J. C. GAMBLES & CO., LTD.
211 BLACKFRIARS ROAD, LONDON, S.E.1

The New
SWAN DOWN
COMPACT POWDER & COMPACT ROUGE

In extra-flat nickel-plated cases with mirrors in lids, complete with blue silk, fleecy puffs.

The reasons why you should stock these compacts, which are already in demand, are:
Excellent quality of powder.
Attractive cases.
Cartons completely cellophaned.
Liberal profit.

Obtain a supply from your usual wholesaler to meet the demand the advertising is creating.



1/9 Each
REFILL and PUFF
1/- less usual Trade discount

If any difficulty write to:
HENRY TETLOW CO.
84, Leadenhall Street, London, E.C.3.

BUY
GENOZO
ON THE BEST TERMS

★

£5 ORDERS OF GENATOSAN PRODUCTS

Genozo may be included in £5 cash with order mixed parcels of Sanatogen, Genasprin, Formamint, etc., which are subject to 10% discount for window show. The addition of a further steady seller to the existing range of Genatosan products enables many chemists, who have not before been able to avail themselves of these terms, to secure the advantage of purchasing on this basis, which shows in the case of Genozo

A profit on selling price of 40%

★

SPECIAL TERMS JUST INTRODUCED

For those chemists who are anxious to make Genozo one of their "star lines" and are prepared to push this "Chemists' own tooth-paste" vigorously, there are even more advantageous terms (for Genozo only) which show—

An even greater profit!

WRITE TO-DAY FOR PARTICULARS

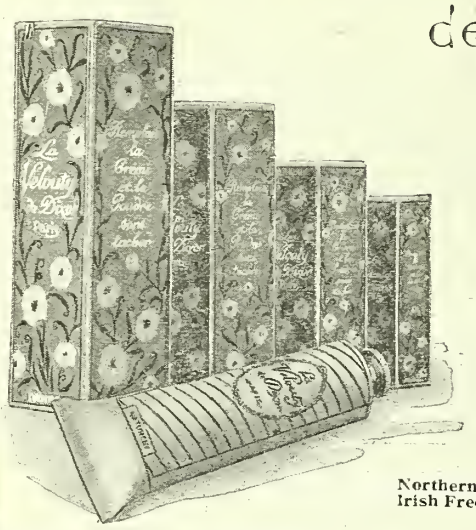
GENOZO Brand TOOTHPASTE British made by GENATOSAN LTD., LOUGHBOROUGH

SALES *ACTUALLY* CONFINED TO THE CHEMISTS' TRADE

the original combined Cream and Powder

la VELOUTY

de DIXOR Paris



The advertised line that you are asked for.

NOW ON P.A.T.A.

Samples free upon receipt of trade card or billhead.

PRICES :—Full size pot -	21/- doz.	RETAIL	2/9
Super tube -	22/- „	„	3/-
Large tube -	14/- „	„	2/-
Medium tube -	7/- „	„	1/-
Handbag tube	3/- „	„	6d.

Made in four shades:

WHITE, IVORY, NATURAL and OCHRE.

Obtainable from your regular Wholesaler or direct from the Sole British Agents:

DEBACQ & HARROP,

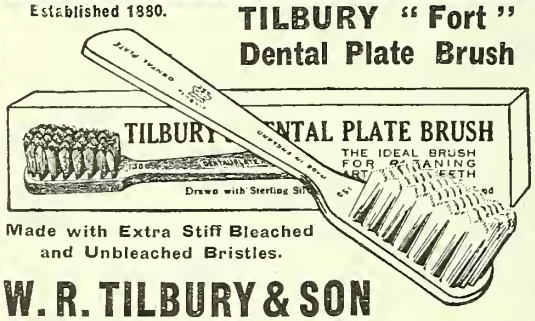
68 Newman Street, Oxford Street, London, W.1.

Sole Distributors for

Northern Ireland: ROBERT MAYRS & CO., 43 Chichester Street, BELFAST
Irish Free State: MAY ROBERTS & CO. LTD., Grand Canal Quay, DUBLIN

Established 1880.

TILBURY "Fort" Dental Plate Brush



Made with Extra Stiff Bleached and Unbleached Bristles.

W. R. TILBURY & SON

47 FRAMPTON PARK ROAD, HACKNEY, LONDON - - - ENGLAND

Pay more for "MIRROR" Blades -



they're worth it

The New Watts "Mirror" Blades

These wonderful Blades with their **Rustless Reinforced Edges of Stainless Steel** treated by a secret process are worth the extra cost. They are keener and give more and better shaves than any others on the market. The Edges are absolutely rustless in any climate.

Watts Mirror Blades

Packed in Patent Spring Lid Nickelled Containers of

10 *for* 5/-

Packed in cartons of

5 *for* 2/6

Giving the Retailer 66⅔% PROFIT on cost.

JOHN WATTS (Sheffield & London) **Limited**
Lambert Works, SHEFFIELD. Established over 150 years.
London: 18 Soho Square, W.1

ODENTIC PLATE BRUSH

Regd. No. 417637.



PACKED IN COUNTER DISPLAY BOXES FROM ALL WHOLESALERS ENQUIRIES INVITED

Estab. 100 years.

W. R. SPEER & SON 215, Dalston Lane, London, E.8

Creating a DEMAND for "Junofloris" TOILET AIDS!

Thousands of Advertisements Every Day!

WE are creating a demand for our "Junofloris" range of Toilet Aids, with new additions, amongst all purchasers of "HARLENE" Preparations by means of the Literature packed with all our other goods. Thousands of *Satisfied* "Harlene" enthusiasts read about them every day—each Customer for *any* "Harlene" Product is also a potential Customer for "Junofloris" Toilet Aids.

Popular Prices — Good Profits

The profit is very generous and the series comprises :—

"JUNOFLORIS"	Prices—Retail
Spring Breath Tablets ..	7½d.
,, ,, ,, ..	1/1½
,, ,, ,, ..	3/-
,, ,, Dentifrice	7½d.
,, ,, ,,	1/1½

"JUNOFLORIS"	Prices—Retail
Effervescent Mouth Wash Tablets ..	7½d.
,, ,, ,, ..	1/1½
Skin and Complexion Cream	1/3
Vanishing Cream	1/3

SELLING TO SATISFIED CUSTOMERS!

"Junofloris" Toilet Aids thus appeal to the most fruitful of all fields—actual satisfied Customers of your own!

WRITE FOR TERMS AND MEET THE DEMAND BY INCLUDING A SMALL QUANTITY IN YOUR NEXT ORDER FOR "HARLENE" PREPARATIONS.

Edwards Harlene Ltd.
20/26 Lamb's Conduit St.,
LONDON W.C.1





The most absorbent Rubber Sponge in the world . . . . Delightfully soft . . . . Free from grit . . Never gets foul Improved by soap . . . . . Invaluable in the sick room . Lasting qualities.

IT NEVER CRUMBLES.

Also

SORBELLE

SORBELLE is the newer Sorbo range of Sponges, having all the Sorbo consistency and softness, but is offered at prices to meet foreign competition. Sorbelle, although offered at low prices, is nevertheless a GENUINE SORBO PRODUCT.

Sorbo
TRADE MARK

Sole Manufacturers:

SORBO RUBBER-SPONGE PRODUCTS LTD.

'Phone: Woking 966 SORBO WORKS, WOKING, SURREY *'Grams: "Sorbo, Woking."*

London Office and Showrooms: 50, PALL MALL, LONDON, S.W.1. 'Phone: Regent 4620.

PURE NATURAL
FRUIT JUICES

Concentrated *in vacuo* at very low temperature without the addition of sugar or preservatives.

RICH IN VITAMINS.

ORANGE - MANDARIN
GRAPE

Factory at Blida, Algeria.

Agents: Forwood Bros. & Donaldson, Ltd.
Ropemaker Street, Finsbury, London, E.C.2

GATTEFOSSE (S.F.P.A.)
156 ROUTE DE CRÉMIEU,
Villeurbanne, Lyon (FRANCE)

CHAMOIS LEATHERS

We Can Offer Special Bargains

HOUSEMAIDS' GLOVES
CHAMOIS LEATHER PADS
AND STITCHED CHAMOIS
LEATHERS SPONGES

Send for List.

JOHN T.
BARRADELL
& SON, LTD.
23, BLACKFRIARS STREET,
MANCHESTER.

'Phone: Blackfriars 2735.
Wires: Sponges, Manchester.

Quality

IN

MEDICATED LOZENGES & PASTILLES

EFFERVESCENT SALINES, ETC.

BISMUTH
DYSPEPSIA TABLETS

CINNAMON
INFLUENZA TABLETS



IODIZED
THROAT LOZENGES

ANTISEPTIC
THROAT PASTILLES

BERMONDSEY LONDON, S.E.16

MEGGESONS have established a record for quality as a result of their experience of over 130 years. During that time it has been their policy to keep abreast of requirements and to introduce in their products the results of medical and pharmaceutical research, while allowing good profits

DOUBLE DIAMOND LYSOL

Guaranteed to contain 50% Cresols



WILL SHOW YOU A BIGGER PROFIT

4 oz. size	- -	**4/-** per doz.
8 oz. ,,	- -	**7/6** ,,
16 oz. ,,	- -	**13/6** ,,
32 oz. ,,	- -	**24/-** ,,

Special Quotations for Large Quantities

P. H. GALLOWAY, LTD. **WALWORTH RD., S.E.17**

JULES FRÉRES

LIME CREAM & GLYCERINE

THE BEST LINE EVER OFFERED TO THE TRADE



Ecinos Series

EQUALLY SATISFACTORY IN THE HOTTEST OR COLDEST CLIMATE

PRICES :

3 oz. bottles	- -	**3/9** per doz.
4 oz. ,,	- -	**4/3** ,,
6 oz. ,,	- -	**5/6** ,,
8 oz. ,,	- -	**6/6** ,,

SEND FOR ILLUSTRATED CATALOGUE



Cameo Series

JULES FRÉRES LTD.

(Sole Agents, P. H. GALLOWAY, Ltd.)

WALWORTH ROAD, LONDON, S.E.17

Glaxo

PRODUCTS AND PRICES

	RETAIL	TRADE
SUNSHINE GLAXO (Prescription or Humanised)	2/–	19/3 per doz.
SUNSHINE GLAXO (Prescription or Humanised)	4/–	38/5 per doz.
GLAXO—Standard Full-cream	1/6	14/5 per doz.
GLAXO—Standard Full-cream	2/6	24/– per doz.
GLAXO—Standard Full-cream	4/6	43/2 per doz.
GLAXO—Standard Full-cream	7/6	72/– per doz.
GLAXO MALTED FOOD	1/3	12/– per doz.
GLAXO MALTED FOOD	2/4	22/5 per doz.
GLAXO MIXER	2/–	1/7 each.
GLAX-OVO	1/6	14/5 per doz.
GLAX-OVO	3/3	31/2 per doz.
GLAX-OVO	6/–	57/7 per doz.
GLAX-OVO (7 lb. tins)	16/6	13/3 per tin.
GLAX-OVO MIXER	2/–	1/7 each.
GLAXO BRAND COD-LIVER OIL (Vitamin-Tested)	2/9	24/9 per doz.

"Ostelin"

VITAMIN D PREPARATIONS

	RETAIL	TRADE
"OSTELIN" Vitamin D Liquid (Glycerin Suspension) 8 c.c.	2/6	22/6 per doz.
"OSTELIN," for Dispensing (in 2, 4, 8 or 16 oz.), per oz.	6/3	9/5 per 2 oz.
COLLOIDAL CALCIUM with "OSTELIN."		
6×1 c.c. ampoules in box	5/–	45/– per doz.
1 oz. bottle	10/–	7/6 per bot.
ELIXIR "OSTELIN" for Dispensing, ½ lb.	5/8	4/3 per bot.
ELIXIR "OSTELIN" for Dispensing, 1 lb.	10/–	7/6 per bot.
"OSTELIN" Vitamin D EMULSION, 8 oz.	2/6	22/6 per doz.
"OSTELIN" NASAL SPRAY (OSNOL)	3/–	27/– per doz.
"OSTELIN" and CALCIUM TABLETS (45 in bottle)	2/6	22/6 per doz.
"OSTELIN" TABLETS for Dispensing (250 in bottle)	12/6	9/5 per bot.
"OSTELIN" TABLETS with PARATHYROID (100 in bottle)	8/9	6/7 per bot.
OSTOMALT, ½ lb.	2/6	24/– per doz.
OSTOMALT, 1 lb.	4/–	38/5 per doz.

Order through your usual Wholesaler

MALTINE

PRODUCTS AND PRICES

	RETAIL	TRADE
MALTINE (Plain)	2/3	20/3 per doz.
MALTINE (Plain)	4/–	36/– per doz.
MALTINE (Plain) Hospital size	15/6	11/8 each.
MALTINE with CASCARA SAGRADA	3/–	27/– per doz.
MALTINE with CASCARA SAGRADA	5/6	49/6 per doz.
Hospital size	22/6	16/11 each.
MALTINE with COD-LIVER OIL	2/3	20/3 per doz.
MALTINE with COD-LIVER OIL	4/–	36/– per doz.
Hospital size	15/6	11/8 each.
MALTINE with CREOSOTE	3/–	27/– per doz.
MALTINE with CREOSOTE	5/6	49/6 per doz.
Hospital size	22/6	16/11 each.
MALTINE with PEPSIN and PANCREATIN	3/–	27/– per doz.
MALTINE with PEPSIN and PANCREATIN	5/6	49/6 per doz.
Hospital size	22/6	16/11 each.
MALTO-YERBINE (Liquid)	3/–	27/– per doz.
Hospital size	30/–	22/6 each.

MALTINE is a malt extract of high diastatic power and contains Vitamin B in notable proportion. In combination with cod-liver oil certified to be exceptionally rich in Vitamins A and D, it presents a completely proportioned food of great therapeutic value. MALTO-YERBINE presents MALTINE in conjunction with an active extract of Yerba Santa, thus providing an admirable nutritive and expectorant mixture which contains no opiates.

Glaxo Feeder

ACCESSORIES AND PRICES

	RETAIL	TRADE
GLAXO BABY CREAM (in tubes)	1/6	13/6 per doz.
GLAXO BABY POWDER (in tins)	1/–	9/– per doz.
GLAXO BABY SOAP (3 tablet box) (In Irish Free State, soap prices are one-third more.)	1/6	13/6 per doz.
GLAXO FEEDER, Complete, 8 oz.	1/6	13/6 per doz.
GLAXO FEEDER, Spare, 8 oz.	1/–	9/– per doz.
GLAXO FEEDER, Premature, 4 oz.	1/6	13/6 per doz.
GLAXO FEEDER, Miniature, 2 oz.	1/6	13/6 per doz.
GLAXO FEEDER MOP	0/4	3/– per doz.
GLAXO MATERNITY BELTS (9 in. or 10 in.) (Belts are not sent on approval.)	7/6	6/– each.
GLAXO MEASURES (Aluminium)	0/6	4/6 per doz.
GLAXO NURSLING TEATS	0/9	6/9 per doz.
GLAXO TEATS (7 kinds—square or fine hole, premature, blind, and 1, 3, or 5 leech-bite)	4½d.	3/4½ per doz.
GLAXO VALVES	3½d.	2/7½ per doz.

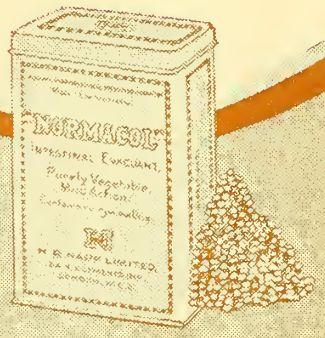
Address Inquiries to SALES MANAGER, 56 Osnaburgh Street, LONDON, N.W.1

"NORMACOL" TRADE MARK BRAND

Intestinal Evacuant.

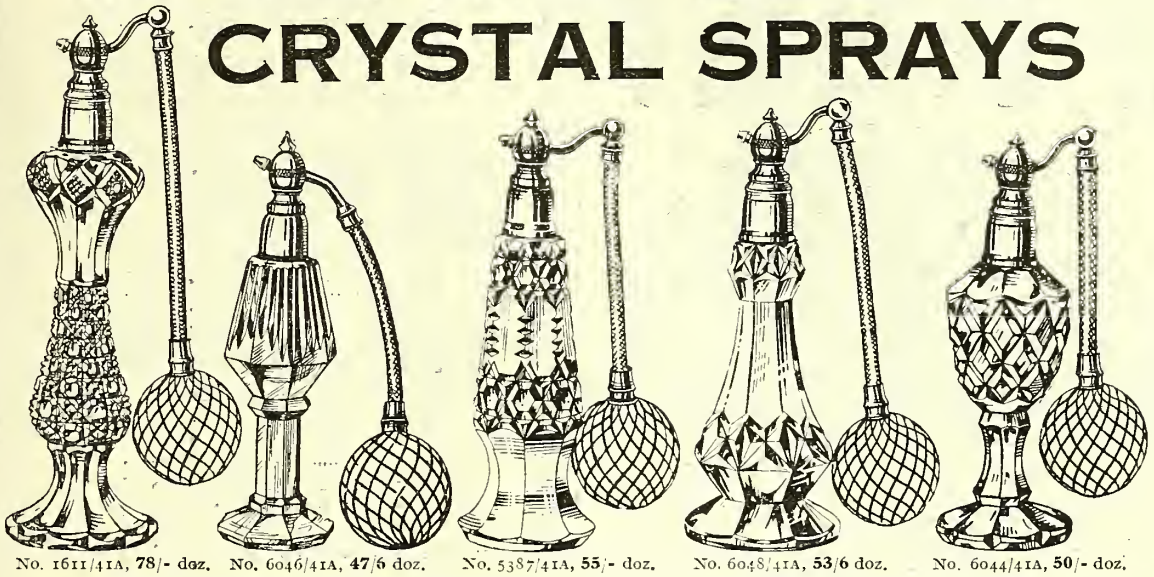
is now widely prescribed under the

NATIONAL HEALTH INSURANCE



H. R. NAPP LIMITED.
3 & 4, Clements Inn, London, W.C.2.
Telegrams: "NAPPCHEM LONDON." Telephone: HOLBORN 1444 (two lines)

B.G. HIGH GRADE HEAVILY CUT CRYSTAL SPRAYS



No. 1611/41A, **78**/- doz. No. 6046/41A, **47**/6 doz. No. 5387/41A, **55**/- doz. No. 6048/41A, **53**/6 doz. No. 6044/41A, **50**/- doz.

THE ABOVE ARE A FEW OF THE RANGE OF OVER 100 VARIETIES THAT WE CAN OFFER.

BEFORE PLACING YOUR ORDERS VISIT OUR SHOWROOMS

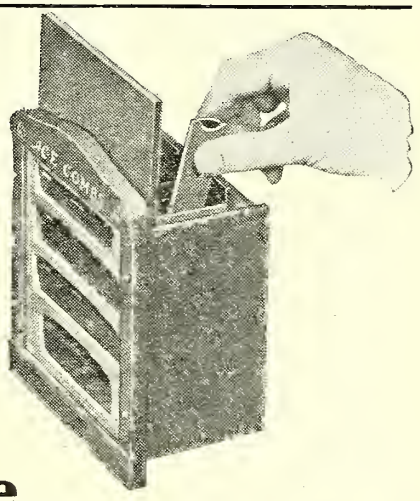
THE ILLUSTRATIONS ARE ONE-THIRD THE ACTUAL SIZE OF SPRAYS

ALL MOUNTS ARE GUARANTEED TO BE OF THE FINEST QUALITY

BRIDGEN & GRIFFIN, Ltd., 25 Bartlett's Bldgs., Holborn, E.C.4

Let this little cabinet help you sell—

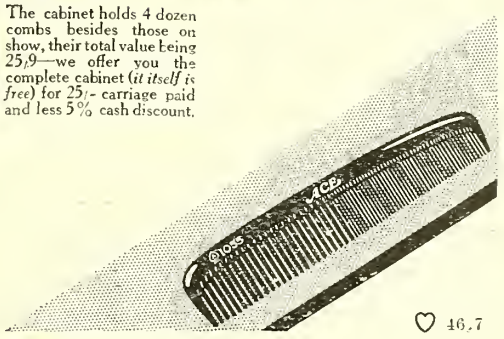
ACE COMBS TRADE MARK



WITH this little case on your counter, your comb sales will rise higher and higher. Keep it full with Ace Combs and be sure of the big profits it will bring. And you're safe in selling Ace Combs, because they cannot injure the hair. Order a case to-day.

free

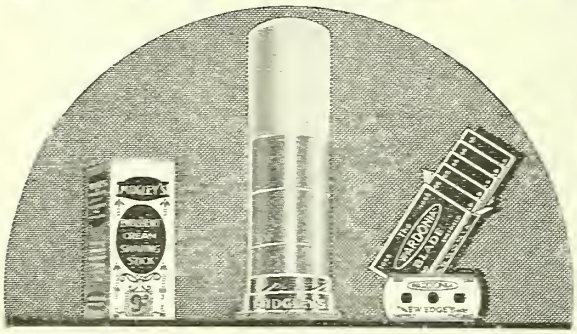
The cabinet holds 4 dozen combs besides those on show, their total value being 25/9—we offer you the complete cabinet (*it itself is free*) for 25/- carriage paid and less 5% cash discount.



AMERICAN HARD RUBBER CO. (BRITAIN), Ltd.
13a Fore Street, London, E.C.2

♡ 46.7

FREE!



Genuine 9d. Midgley's Full-size Shaving Stick with each 1/3d. packet of Wardonia "New Edge" Blades purchased.

That's the offer thousands of retailers are making good profits on. Widely advertised in the National and Provincial Press. Generous supply of Window and Counter Display Matter FREE with every order. Delivery guaranteed of first order whatever quantity, *so order generously and at once* from your usual wholesaler or direct

Enormous Demand
Order at once
50% PROFIT FOR YOU

TRADE TERMS:—

1 to 4 Cartons *(per carton)* 21 -

5 Cartons *(per carton)* 20 -

10 Cartons *(per carton)* 19 -

20 Cartons *(per carton)* 18 -

How Packed:
In attractive Display Carton CONTAINING—
24—PACKETS of 5 WARDONIA Blades & 24-9d. Midgley's Shaving Sticks.
RETAIL VALUE OF ABOVE CARTON **30/-**



FOR TWO MONTHS ONLY

Sole Makers:
THOMAS WARD & SONS LTD
Wardonia Works, Sheffield, England

Moderately priced—
yet unsurpassed
at ANY price

MYATT
DAYMARK
BLADES

For double-edge razors

Five for 1/3
50% PROFIT ON COST

Sole Manufacturers
W. J. MYATT & CO., LTD.
BIRMINGHAM

OVER 53% !! This Profit on your outlay is guaranteed to you by **The FLEET Blade**



A Sheffield Product from the Molten Steel to the Finished Blade.

Retails at 3 for 7½d.

Liberal trade-making samples given to new stockists.

Bonus offered for Window Displays.

Sample and terms from sole makers:—
DOMINION STEEL CORPORATION, Ltd.
Fleet Works, Queen's Road, SHEFFIELD.

AMO
THE INCOMPARABLE BLADE THAT SHEWS 120% PROFIT



DISPLAY AND SELL "AMO" SHAVING PRODUCTS

Nationally Advertised. OBTAINABLE OF ALL WHOLESALERS.
FREE SAMPLE BLADE AND ILLUSTRATED LIST ON APPLICATION TO—
AMO SAFETY RAZOR BLADE Co., Ltd. Broad St. House LONDON, E.C.2

ORDER THESE BLADES NOW!

The new Souplex Programme offers a value in Razor Blades without precedent. The quality of the blades themselves is better than ever before and it is only due to the rapidly increasing demand for Souplex-made blades that the manufacturers have been enabled to now offer these attractive new prices.

Order your supplies at once as heavy demand is anticipated. Tell your customers to try these cheaper blades—they will not be disappointed. Look at your profits below!

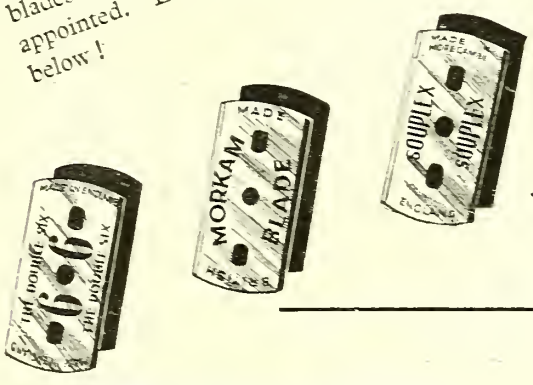
New Low Prices offer big inducement to shavers

Look!

1D DOUBLE SIX

1½D MORKAM

2D SOUPLEX



PROFIT to you on buying price

92%

72%

50%

Made by SOUPLEX LTD., MORECAMBE

MASON PEARSON
HAIR-BRUSH

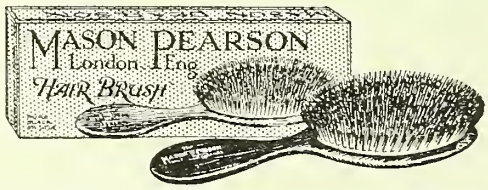
The Brush which is asked for

There is only one hair-brush which is equally suitable for people of both sexes and all ages :—The "*MASON PEARSON*" Brush. It brushes much more quickly than any other brush. It brushes more efficiently. It cleanses the scalp more gently and thoroughly than any other brush. It disentangles long hair without tugging it, and restores the "set" to ruffled hair.

The reason is that all "*MASON PEARSON*" Brushes are made of the most perfect hair-brushing material—*the black unbleached bristle of the Indian Wild-Boar*—which, arranged by our special patented method in a pneumatic rubber cushion, makes the highest grade Hair-Brush obtainable to-day.

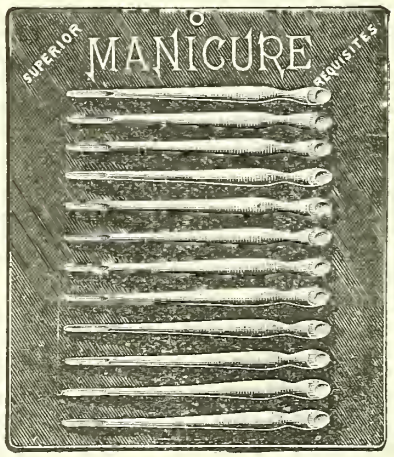
The "*MASON PEARSON*" Brush is known and asked for everywhere by its name.

The brushes are made in eight models, retailing from 3/6 to 18/6, all subject to generous discounts giving you a substantial living profit. Can be supplied through your usual wholesaler.



MASON PEARSON SELLING AGENCY, LTD., 59 NEW OXFORD ST., LONDON, W.C.1

Manicure Goods



Rubber-ended HOOF STICKS

carded or in bulk.
Wood or Ivory.

Export requirements specially catered for.

WHOLESALE & EXPORT ONLY SUPPLIED.

Don't Buy Abroad, We can meet *all your requirements at competitive prices.*

SEND YOUR REQUIREMENTS TO THE ENGLISH MAKERS.

Robert Lee
'Phone : Archway 2144.

14 Calverley Grove, Upper Holloway, London, N.19

G. B. KENT & SONS, LTD.

Are known the World over as the Largest Manufacturers of

BEST BRITISH BRUSHES

Please write for full Particulars to :—

75 FARRINGDON ROAD, E.C.1.

WE MANUFACTURE SAFETY RAZOR BLADES FOR ALL CLASSES OF TRADE.

		RETAIL AT
POPULAR	**EMMAH**	**2d.** *each*
"P.C."	- -	**1d.** *each*
PLANET	- -	**3d.** *each*

WITHOUT EQUAL IN THEIR CLASS.

Send for particulars of our new FREE GIFT SCHEME in connection with PLANET BLADES.

Enquiries and quotations promptly attended to.

EMMAH PRODUCTS, LTD.

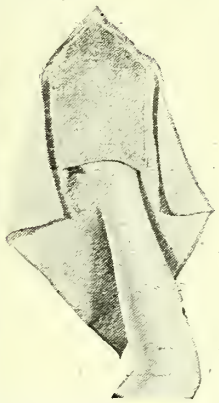
14-16 LOWER CLAPTON ROAD, LONDON, E.5

ARE YOU STOCKING THE "PUREFECT" FACE CLOTHS?

PATENTED BRI.A.P. No. 22000/30.

THE COMBINED FACE AND BATH CLOTH WHICH DOES NOT SLIP
∴ AND MAKES ORDINARY FACE SQUARES OLD-FASHIONED ∴

CHEMISTS REPORT RAPID SALES



(1) *Special material which improves with use.*
(2) *Lasts three times as long as the ordinary squares.*
(3) *Contrasting coloured pockets, very attractive.*
(4) *Beautifully presented in high-class display cabinet.*

Price 7/- Doz.

Order from your Wholesaler To-day

Manufacturers and Patentees :

THE FENTON MANUFACTURING CO.
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(Phone : Central 6573)

Made in England
(*Wholesale & Shipping only*)

TATCHO
THE HAIR RESTORER

PROMOTES, PRODUCES, BEAUTIFIES THE HAIR

Sample Size 6D.
6 Bottles in Case for Counter Display, 4/- PER DOZ.

1/3 size .. 12/6 per doz.
2/9 size .. 26/- per doz.

TATCHO Laboratories, 5 Great Queen Street, London, W.C.2

1/3 PROFIT ON EVERY BOTTLE SOLD

The new eyebrow beautifier, "PERM BROW," has gained the instant approval of smart women everywhere. It is waterproof, does not rub off, is easy to apply, and lends a lasting charm.

PERM BROW

Our consistent consumer advertising has created an increasing demand. Get a stock now—every bottle gives you 1/3 PROFIT!



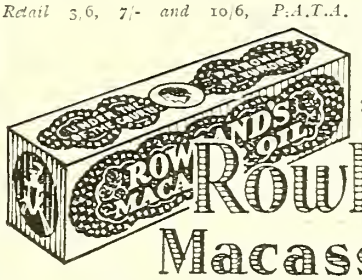
Obtainable from all wholesale houses or direct from our West End sales office :—

MIRUS LTD., 53a MADDOX STREET, W.1

For 137 years

Rowland's Macassar Oil has been a favourite dressing for the hair, but its close resemblance to the natural oil has caused it to be used more and more as something better than a hair dressing. It keeps the hair healthy and prevents the encroachment of greyness and baldness and is guaranteed free from harmful ingredients. You can recommend it with confidence.

Retail 3/6, 7/- and 10/6, P.A.T.A. Of all wholesalers. Made in two forms, the original for dark hair, and "Golden" for fair or grey hair.



Rowland's Macassar Oil

A. ROWLAND & SONS, LTD.,
112 GUILFORD STREET, LONDON, W.C.1.

JH&C RM5AT

NOTICE OF TRANSFER

The well-known series of all Glass
& other Medical Sprays & Atomisers

The ASEPTUS–ARISTON–ALPHA BETA–DELTA–OMEGA–MIRA–VEVAX

and various special patterns

We have acquired from Messrs. R. J. REUTER LTD. all rights and Trade Marks of their series of Medical Sprays. We have taken over all stock of these, together with their expert manufacturing and fitting staff, and are in a position to supply these fine grade products in exactly the same style and quality as hitherto, at the same prices and terms.

BRITTON, MALCOLM & WAYMARK, LTD.

38 SOUTHWARK BRIDGE ROAD, LONDON, S.E.1

TELEPHONE: WATERLOO 1442 (2 LINES)

SUMMER HOLIDAYS!

Whether your customers are going to

"THE DRIER SIDE"
THE OCEAN COAST OR
THE SUNNY SOUTH

They will still want the usual

HOLIDAY ACCESSORIES

COMPLETE YOUR STOCKS FROM:

"NEWBERYS"
(F. NEWBERY & SONS LTD)
CHARTERHOUSE SQ., E.C.1.
Tredegar House, CARDIFF. College Lane, LIVERPOOL.

SEASICKNESS

IS POSITIVELY PREVENTED BY

SEAJOY PLASTER

REGD.

Seajoy Plasters are commanding an ever-increasing demand on account of their efficacy in preventing **all forms** of Travel Sickness.

A Profitable and Quick Seller. PRICE 3/-

From all Wholesale Agents or direct from

The SEAJOY CO. Putney, S.W.15

Telephone - - PUTNEY 0414.



Wholesale Prices

1/3 Size
11/6 per dozen net

3/- Size
27/6 per dozen net

Carriage Paid Gross Quantities or equivalent.

Manufactured only by

J. F. WHITE & CO., Chemists
BENSON STREET, LEEDS.

INSECT BITE STICK

Be prepared for the Mosquito Plague
which is expected this summer



Made in two sizes

Small - - 5/- per dozen
Large - - 8/- per dozen

SUPPLIED IN SHOWCASES OF SIX

Manufactured by

WILLIAM TOOGOOD LTD.

77 Southwark Street, S.E.1.

SUMMER SUNSHINE
SELLS STRAW HAT DYES!

1930 is very definitely a STRAW HAT YEAR while there is a UNIVERSAL DEMAND for 'AURORAL' Cold Water Dyes for Dainty Garments of every kind.

For over 50 years, Chemists throughout the Empire have recommended Whitaker's Famous All-British Dye Products.

LUTON
AURORAL
DYEFLIT
VELT

STRAW HAT DYES	12/- per Doz. Retail P.A.T.A. **1/4**
COLD WATER DYES	4/- per Doz. Retail P.A.T.A. **6d.**
MAGIC COLOUR REMOVER	4/- per Doz. Retail **6d.**
THE SUPER CLEANER	Household size **6/-** per Doz. Retail **9d.** Large size **12/-** per Doz. Retail **1/6**

VERY SPECIAL PRICES and DISCOUNTS are also allowed to Overseas Buyers.

Write for Export Catalogue.

AND NOTE THE PROFIT—

All orders subject to 5% for Cash in 7 days. £4 Assorted Orders subject to 2½% in addition to 5% for Cash in 7 days (=OVER 52% on outlay).

£8 Assorted Orders subject to 5% in addition to 5% for Cash in 7 days (=OVER 57% on outlay).

For Patterns and Particulars of a Full Range of Stains, Varnishes, Colours and Dyes for all purposes write to-day to

WHITAKER & CO. (Kendal), Ltd. Dye Specialists for Chemists, **KENDAL, Eng.**

Watersprite
FACE CLOTHS
MADE IN ENGLAND



THESE charming Face Cloths, being specially knitted, have just sufficient elasticity to render them delightfully soft in use, and appeal instantly to discriminating buyers.

In attractive display cartons printed in seven colours, containing two dozen cloths

POPULAR, DAINTY AND DURABLE

WHITE with Coloured Borders.		
G220.	Overlocked, Assorted Colours	**4/- doz.**
G221.	Do. and Cross Stitched Do.	**4/6 „**
G222.	Shell Stitched Do.	**5/3 „**
G223.	Do. and Cross Stitched Do.	**5/9 „**
COLOURED with Coloured Borders.		
G224.	Overlocked, Assorted Colours and Cross Stitched	**5/6 doz.**
G225.	Shell Stitched Do.	**6/- „**
SPECIAL ASSORTMENTS.		**per carton.**
G226.	Cartons containing 4 each of above 6 Nos.	**10/6**
G227.	„ „ 6 „ G220, 222, 223, 224	**10/3**

Sole Manufacturers :

SOLPORT BROTHERS LIMITED

184-192 GOSWELL ROAD LONDON, E.C.1

Also
Sole Manufacturers of :
"Watersprite" Knitted Face Cloths.
"Nerissa" Puffs, Swansdown, Wool, Velours.
"Nerissa" Manicure Outfits.
"Nerissa" Compact Powders.
"Fursac" Puffs.
"Beavelour" Puffs.
"Sesame" Sponge Bags and Handibags.
"Kute" Wrist Straps.
"Easifix" Finger Stalls.
"Mirror" Nail Polishing Stones.
"Portia" Corn and Bunion Plasters.
"Portia" Non-flam Reading and Sports Shades.
"Portia" Non-flam Eyeshades.
"Portia" Travelling Companions.
"Portia" Sanitary Belts.

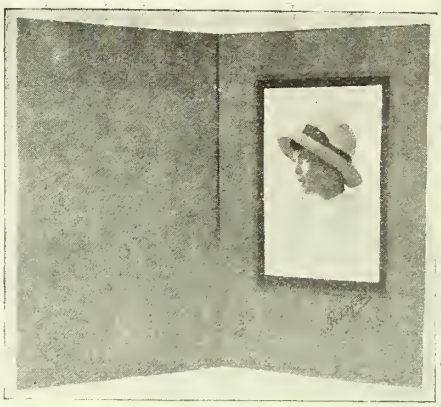
Sole Concessionnaires for :—
"Portia" Baby Balances.
"Portia" Manicure Files.
"Foldo" Finger Stalls.
"Research" Tooth Brushes.
"Ranelagh" Nail Brushes.
"Mistwell" Atomisers and Perfume Sprays.

SOLPORT'S GOODS ARE GOOD GOODS

INCREASE YOUR PROFITS—

BY SELLING U. P.

High-Class ENLARGEMENTS,
TINTOGRAPHS (COLOURED ENLARGEMENTS)
PORTROGRAPHS (STUDIO FINISHED PORTRAITS from SNAPSHOTS)
ETCHINGS AND STATUETTES (MADE FROM AMATEURS' NEGATIVES)
REPRODUCTIONS (IN OILS, WATER COLOURS, etc.)



PORTROGRAPHS

Retail at **2/-** each.
3 from the same negative **4/-**
6 " " " " **7/6**
From Prints **1**/- extra.

Counter Specimens sent Post Free **8**d. each net.



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This card sent post free for **8**d. to Dealers sending this work to us.

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SIX from the same Negative **1/6**
THREE " " " " **1/-**
SINGLE CARDS **6**d. EACH.
All Supplied in Folder Mounts.



This Folder sent FREE to Dealers sending orders for this work.

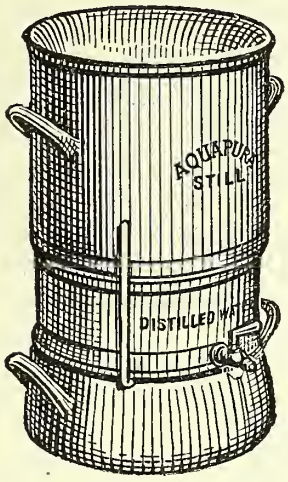
D. & P. High Quality Work Reliable Service

Local Collections in a wide area around LIVERPOOL, WIRRAL, MANCHESTER, OLDHAM, LEEDS and STOCKPORT.

UNITED PHOTOGRAPHERS, LIMITED

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72, MILES ST., DINGLE, LIVERPOOL.
CROWN STREET, LEEDS.

3 PROFITABLE PROPOSITIONS



THE "AQUAPURA" STILL. Price 52/6

Is practical, scientific and semi-automatic, producing one quart of distilled water per hour at a negligible cost, only gas being required. It just stands on a gas ring, primus stove or fire. Made of "Celeste Blue" Porcelain Enamelled Steel. It pays for itself quickly.

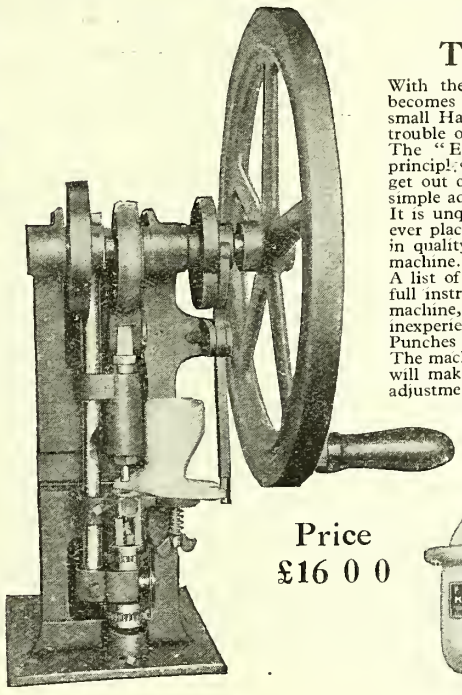
Case and packing free, carriage paid, immediate delivery. Used by Doctors, Chemists, Hospitals, Sanatoria, Electricians, Photographers, Invalids, Dyspeptics, and by everyone who wants a supply of pure water.

• • • • •

Newcastle.
"We have purchased scores of machines for various purposes, but so far no machine has been more mechanically constructed and of equal value for the work entailed in its production. Besides that, it does its work with such ease and facility that we do not think anyone would experience the slightest difficulty in manipulating them."—The I. Co.

Bournemouth.
"I consider the 'Eureka' Machine all that can be desired by the dispensing pharmacist. It is very simple to use, and makes a beautiful Tablet, equal in finish to any I have seen, and marvellously accurate in weight. I find it most useful in my pharmacy."—H. J. H.

• • • • •



Price £16 0 0

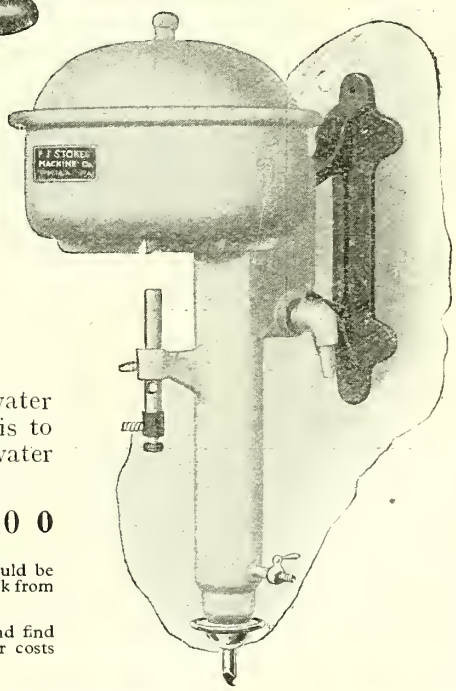
THE "EUREKA" TABLET MACHINE

With the increasing demand for compressed tablets, it becomes necessary for the Retail Pharmacist to have a small Hand Tablet Machine with which he can, without trouble or expense, produce his own tablets.

The "Eureka" Tablet Machine is built on scientific principles, and is not a delicate piece of machinery likely to get out of order. Very strong and durable, it possesses simple adjustments by which absolute accuracy is assured. It is unquestionably the best and cheapest hand machine ever placed on the market, and will produce tablets equal in quality to those produced by the most expensive power machine.

A list of Formulæ for all the common preparations, with full instructions how to make tablets, is given with each machine, so there is no difficulty whatever for anyone inexperienced in making perfect tablets. Two sets of Punches and Dies are included.

The machine is 18 inches in height, and weighs 75 lbs., and will make tablets from $\frac{1}{4}$ in. up to $\frac{1}{2}$ in. diameter. The adjustments are extremely simple, only two adjustments being necessary, for the weight of Tablet and the amount of pressure. PRICE £16 0 0



THE STOKES AUTOMATIC WATER STILL

The Stokes Still is guaranteed to produce chemically pure water at a negligible cost. It is automatic; all that is required is to connect to gas and water, and it will deliver 3 pints of water per hour without any further attention.

No. "O" Size Still, Price £6 10 0

"I have been using your splendid Water Still (Stokes) for 18 months past, and should be most pleased to speak a word for it any time. I have had from 20 to 30 gallons a week from it since."—G. A. M.

"I have had fourteen months' experience of a Stokes Gas-Heated Water Still, and find it simplicity itself—turn water on, light gas, and the trick is done. Distilled Water costs the price of the gas burnt."—J. W.

Full particulars sent on receipt of postcard.

THOMPSON & CAPPER WHOLESALE LTD.

MANESTY BUILDINGS, 2, COLLEGE LANE, LIVERPOOL

PARAFFINUM LIQ. B.P.

Telephones:
Albert Dock 2741-2

UNITED WHARF, SILVERTOWN, E.16

REDDGRAVE SITORA LTD.

Prompt Deliveries



All Districts

WHITE OILS

HALF WHITE and
COLOURED OILS
for Brilliantines, &c.

UNITED WHARF, SILVERTOWN, E.16

Telephones:
Albert Dock 2741-2

REDDGRAVE SITORA LTD.



CONTROL IN THE RIGHT HANDS.

The selling of Rendell's Soluble Quinine Pessaries is done by retail chemists, who get their supplies from recognised wholesalers.

The public prefers to buy them, feeling that implicit trust may be placed in a famous line obtained from a regular source of supply for medical and toilet requisites.

The trade knows that the manufacturers can be relied upon to provide the sound backing of attractive advertising material and a maintained price. Write for details.

W. J. RENDELL, LTD.,
15, Chadwell Street,
London, E.C.1.


CONTROL
IN
THE RIGHT WAY.
When a member of the public, having decided that Birth Control is necessary and right, asks his chemist for a box of Rendell's, a step has been taken that can have none but satisfactory results to both buyer and seller.
Success for 50 years proves, beyond all doubt, that Rendell's Soluble Quinine Pessaries provide the right way of control.
Chemists know this from the repeat orders and goodwill that invariably accompany the handling of this line.
W. J. RENDELL, LTD.,
LONDON, E.C.1.
W. J. Rendell's "Wife's Friend" Soluble Pessaries.
The reliability of Rendell's Pessaries set out in
"The Wife's Handbook."
Be sure and look for the autograph Trade Mark on the labels to
prevent disappointment.
W. J. RENDELL, London
Trade Mark
All trading rights
in reserve

BURROUGH'S

S.V.R.

TRY THE EXTRA RECTIFIED FOR YOUR PERFUMERY. RECTIFIED TO BE THE PUREST AND MOST NEUTRAL

ALL STRENGTHS TO

DUTY PAID AND DUTY FREE for EXPORT AND SCIENTIFIC PURPOSES

ABSOLUTE ALCOHOL

LEMON SQUASH LIME JUICE CORDIAL

WINES SPIRITS CORDIALS

MAKE A NOTE FOR YOUR XMAS TRADE

"Quinta Real" Elegant Old Tawny Port.

Burrough's Invalid Port.
Ports for Medicating Purposes.
"Donzardo" Sherry—Delicate Pale Dry.
Sherry for Ipecac. Wine.

"Bourg" Freres Champagne.
Orange Wine.
Orange Quinine.
"Bell Bird" Australian Wines.

"WHITE CROSS" WHISKY, BRANDY and RUM

"BEEFEATER" Gin—Purest and Best.

Write for Samples and Quotations

James Burrough Ltd.

4 Cale Distillery, Lambeth, S.E.11

Telegrams: "Burrocale, Phone, London." Estd. at Chelsea 1820. Telephone: Reliance 1166.

D D

Roboleine

THE FOOD THAT BUILDS THE BODY

ROBOLEINE contains all essential vitamins:— BONE MARROW: Yellow marrow from the long bones to stimulate formation of red corpuscles and so strengthen the whole nervous system. Red marrow from the rib bones to stimulate formation of white corpuscles and increase resistance to disease. MALT, a natural laxative and source of energy. EGG YOLK, containing lecithin, the greatest nerve food known. LEMON JUICE, neutralised for building bone and preventing skin trouble.

ROBOLEINE corrects Metabolism and is recommended in cases of Malnutrition, Debility, Sleeplessness, Loss of Weight, and in all Tuberculous conditions; also to Nursing and Expectant Mothers as a galactagogue, and as an adjunct in the Dieting of Infants, etc., etc.

ROBOLEINE is concentrated nourishment that revitalises the body and feeds the nerves. Easily assimilable, it is the best reconstructive tonic food available.

WRITE FOR TERMS TO

OPPENHEIMER SON & Co., Ltd.,

HANDFORTH LABORATORIES,
CLAPHAM ROAD,
LONDON, S.W.9



CHEMISTS TENDERING FOR OR SUPPLYING

DISINFECTANTS

TO

HOSPITALS, PUBLIC INSTITUTIONS,
Etc., Etc.

SHOULD REMEMBER

BURT, BOULTON & HAYWOOD, LIMITED

are one of the largest Wholesale Manufacturers and offer Special Terms for Contracts.

Carbolic Disinfecting Fluids containing 3% to 80% Tar Acids. Carbolic Disinfecting Fluids Rideal Walker Co-efficients 2 to 20

White Disinfecting Fluids—miscible in salt, fresh or brackish water Co-efficients 10/12, 18/20, 20/22.
Lysol 50 % Cresols guaranteed. Pine Disinfecting Fluids.
Pink Carbolic Disinfecting Powders containing 5 % to 20 % Tar Acids.
Creosote Disinfecting Powders containing 5 % to 20 % Tar Acids.
Liquid Carbolic and Cresylic Acid Dark 95/97 %, and Pale 97/99 %.
Sulphur Candles. Formaldehyde (Formalin) 40 % Solution.
Formaldehyde (Formalin) Tablets. Liquid Soaps.
SOLUBLE Carbolic or Pine Blocks for road watering vans.
Carbolic Weed Killer, etc.

Tar Acids and Rideal Walker Co-efficiency guaranteed. May be sold by Chemists and Druggists under own name.

Special Disinfectant Fluids approved by the Ministry of Agriculture under the "Diseases of Animals Acts." May be packed and sold by Chemists under own name.

Samples and prices on application to

BURT, BOULTON & HAYWOOD, LIMITED

Salisbury House, London Wall, London, E.C.2.

"Glucose" "Sandoz"

(PURE DEXTROSE)

$C_6H_{12}O_6$

A

MEDICINAL GLUCOSE of the most extreme Purity and Solubility

Sold in Bulk or in 1 lb. packages

LOWEST PRICES

TERMS ON APPLICATION

BROOKS & WARBURTON

232-240 VAUXHALL BRIDGE RD., S.W.1

Everybody's using it now!

Snowfire Cream has gone from success to success. Thousands of women to-day rely on this pure, non-greasy vanishing cream as a skin-protector and beautifier. Its name and reputation, backed by consistent advertising, has made Snowfire the leader among popular priced face creams.

Snowfire CREAM



In Opal Jars and Aluminium handbag containers at 1/3 and 3d. respectively (retail).

Manufactured by
F. W. Hampshire & Co. (1927), Ltd.
Sunnydale Works, Derby.

More NEW customers



It's nice to see NEW customers walking into your Pharmacy, isn't it? They are always welcome because a new customer is worth money—a lot of money to you. And the advertising for Moorland Brand Indigestion Tablets is sending many NEW customers to pharmacists

★

They'll ask YOU for

MOORLAND

BRAND

INDIGESTION TABLETS

Therefore, it will pay you to display these quick and profitable sellers

W. B. CARTWRIGHT LTD. RAWDON

Felsol (Regd)

INTERNAL NON-NARCOTIC TREATMENT

FOR

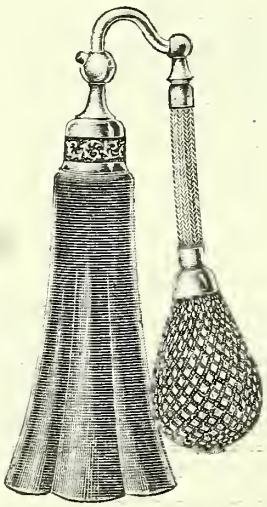
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EXTENSIVELY RECOMMENDED AND PRESCRIBED BY THE MEDICAL PROFESSION.

Full P.A.T.A. terms upon request.

BRITISH FELSOL COMPANY, LTD., 15, CAROLINE STREET, LONDON, W.C. 1.

Telephone : Museum 2855. *Cables : "Felsol," London.*



E—53.

LONDON SHOWROOMS :
27, OLD BOND ST., W.

DeVILBISS

GUARANTEED

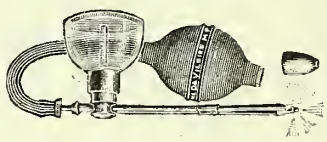
PERFUMIZERS AND ATOMIZERS

are well-known all over the world. They are of sound construction and absolutely adapted to the purposes for which they are designed.

• • • • • •

The DeVILBISS Co., Ltd.,
WEST DRAYTON
∴ MIDDLESEX ∴

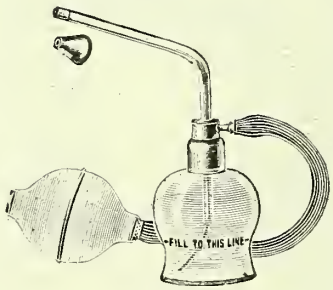
'Phone : Gerrard 6867.



DeVILBISS No. 15.



ATLAS, No. 21.



ATLAS, No. 29.

HIGH GRADE ESSENCES CAN BE MANUFACTURED QUICKLY AND ECONOMICALLY BY SIMPLY DILUTING ONE OF OUR

100% AROMA BASES

TO ANY DESIRED STRENGTH.

COMPLETE FORMULAS GIVEN FOR ANY FLAVOUR YOU MAY WANT TO PRODUCE.

OUR 100% AROMA BASES CONTAIN NO ALCOHOL or SOLVENT.

CONTRACT STOCKS CARRIED IN LONDON BY OUR AGENTS.

SOLV-O-HOL

The Perfect Alcohol Substitute for your Flavouring Extracts, Non-alcoholic Perfumes, etc.

SOLV-O-HOL

is Better than Alcohol

BECAUSE:

1.—It is completely odourless and tasteless.
2.—It is less toxic than pure grain alcohol.
3.—It is less volatile—it will HOLD your flavour.
4.—There are no restrictions as to its use anywhere.

SOLV-O-HOL *can be had in two qualities:*

SOLV-O-HOL—For all Ethereal Flavours, also Vanillin and Coumarin.

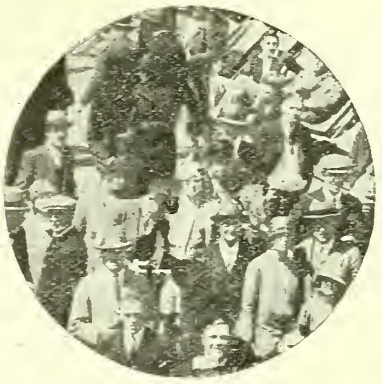
SOLV-O-HOL F—For Essential Oils, Lemon, Orange, Non-alcoholic perfumes. Dissolves 8 to 10%.

Agents for the United Kingdom:

BURNELL HARDY, Ltd.
106 Queen Victoria St.
London, E.C.4, England.

FELTON CHEMICAL COMPANY, Inc.
599 Johnson Avenue,
Brooklyn, N.Y., U.S.A.

Some more NEW customers



"Still they come—all wanting their packets of Moorlands. What a splendid line they are. They sold very well before, but now they are backed up with the Big National Advertising, sales have increased enormously. That window display has certainly done good work"

★

They'll ask YOU for

MOORLAND

BRAND

INDIGESTION TABLETS

The best and most profitable line of its kind on the market to-day

W. B. CARTWRIGHT LTD. RAWDON

R.P.S.A.

made in our own Laboratories under personal supervision

PHARMACEUTICAL PREPARATIONS & PACKED GOODS

PRESTON'S ANTI-STING COMPLEXION CREAM

2 in 1 DUO-CREAM

Parrish's Chemical Food.
Influenza Mixture.
Petroleum Emulsion.

LYSOL
(50 % Cresols).

Medicinal Paraffin (s.g. 890-895).
Cod Liver Oil Emulsion.
Syrup of Figs.

STANDARDISED TINCTURES & EXTRACTS.
GREEN EXTRACTS (New) EXT. HENBANE BIEN.
EXT. BELLADONNA, Etc.

Correspondence invited with Buyers at Home and Abroad.
Price Lists and Quotations on application.

THOS. HODGKINSON, PRESTONS & KING
Wholesale and Export Druggists and Manufacturers of Pharmaceutical Preparations.
262, BISHOPSGATE, LONDON, E.C.2.
Telegrams: "Kraals, Norton, London." Telephone: Bishopsgate, 1327/8

FOR PACKED GOODS:—R.P.S.A., LTD., Besson Street, New Cross Gate, S.E.14
Telephone: New Cross 3717.



WRITE FOR PARTICULARS

Two efficient salesmen desire situations (unpaid) at your counter



KAYBRO ANTISTING

Retail - 9d. per tube
Wholesale - 6/- per box of 12, post paid.

VIPER FLYCATCHERS

Three widths - 2", 3", 4"
Also FLYSAC and GORGON Flycatchers

Write for sample and prices.

KAY BROTHERS Ltd. STOCKPORT

BAISS BROTHERS & COMPANY, LTD.

ESTABLISHED 1833.

TRADE B&G MARK

EXPORTERS TO ALL PARTS OF THE WORLD.

DRUGS CHEMICALS
GALENICALS
PHARMACEUTICAL PREPARATIONS
SPIRITUOUS PREPARATIONS
(in Bond, Duty Free)
SURGICAL INSTRUMENTS
VETERINARY INSTRUMENTS
DRESSINGS
DRUGGISTS' SUNDRIES
PACKED GOODS

Complete Catalogues in English, Portuguese and Spanish upon application.

The Home Trade specially catered for. Delivery by own motors.

Sole Proprietors of GOLD MEDAL CREAM EMULSION OF COD LIVER OIL WITH HYPOPHOSPHITES.

Send for samples and prices.

Offices, Warehouse and Laboratories:
174/176 GRANGE ROAD
Bermondsey, LONDON, S.E.1.
Where please address all communications.
'Phone: Bermondsey 1301 (3 *lines*).
Telegraphic Address: "Ipecac, London."
Codes: Bentley's, A.B.C.—5th Edition.
Druggists' Sundries & Surgical Instrument Departments:
41/43 GRANGE WALK, LONDON, S.E.1.

Still more NEW customers



"Here's another NEW customer for a packet of Moorlands—bought several other things as well. These Moorlands are selling better than ever. The National Advertising is certainly helping to increase my business—I must keep up that window display—there's money in it"

★

They'll ask YOU for

MOORLAND

BRAND

INDIGESTION TABLETS

Plenty of good show-matter available so put in a display at once

W. B. CARTWRIGHT LTD. RAWDON

Reduced Tablet Prices

Owing to vastly increased production we have pleasure in announcing that we have reduced prices of nearly all of our tablets, "Own Name" and otherwise. We hold an unrivalled position in the trade for tablets, bulk and packed. The fine quality of our products has long been beyond all question and the service we offer is second to none. A postcard from any pharmacist will bring our Revised Price List of proprietary and "Own Name" lines.

To Owners of Proprietaries!

Our Factory is equipped with the most modern plant for tablet and other special formula work, and is capable of an exceedingly large output. We manufacture from private formulæ or from customers' own material. If desired, we can provide a distinctive pack, and prepare complete, ready for sale. We offer expert advice, efficient service, and absolute fidelity to formulæ, with strict secrecy. Enquiries from interested Principals invited.

MENLEY & JAMES, LTD.

P.O. BOX 12a, HATTON GARDEN, LONDON, E.C.1

ROBUVAL

Elixir Strontii Bromid. et Valerian Deodorat.

AN EXTREMELY PALATABLE CALMATIVE & NERVE SEDATIVE

8 OZ. BOTTLES **3/6**

Prepared and extensively advertised by

ROBERTS & CO.

Pharmaciens,

76, NEW BOND ST., LONDON, W.1,

and at PARIS.

TRADE MARK R & Co

NURSE HARVEY'S MIXTURE

A safe, simple and reliable remedy for Children's Ailments is advertised so extensively in the daily and weekly Press as to bring mothers to the retailer without effort on his part.

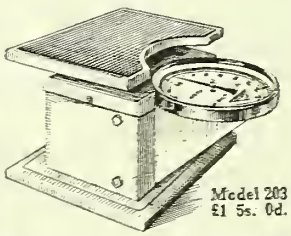
The selling has been done before the mother reaches the chemist, and, having supplied her, it is only common sense to claim she will buy other family necessaries from him. Moreover, the continuous demand for it produces a quick turnover.

For Direct Terms apply to—

OSCAR SCRUTON & CO., YORK

Seca

WEIGHING MACHINES



Model 203 £1 5s. 0d.

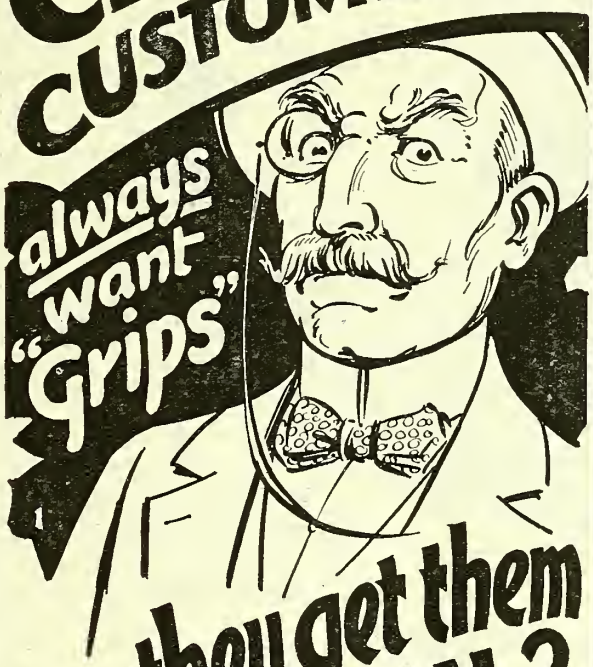
Every one of your customers should have a Seca.
Slide poise and Dial types. Baby Scales.

25/- to 115/-

Particulars and terms from:

Lionel Stuart & Co.
61 Gt. Portland Street
London, W.1

Your CHESTY CUSTOMERS



Can they get them from YOU?

KEEP UP YOUR STOCKS all through the year and make the most of a good line. Many of your customers, particularly the chesty ones, take "GRIPS" regularly. A prominently-displayed jar of these famous Pastilles will keep you in touch with them constantly.

Replenish your stocks of

"GRIPS"
First-aid Pastilles

Agents to the Wholesale and Retail Chemists' Trade :

THOS. CHRISTY & CO.,
4/12, Old Swan Lane, LONDON, E.C.4.
CS

and all SATISFIED customers



"Until I displayed Moorlands linking up with the National Advertising, I never realised what quick and profitable sellers these tablets were. I, personally, have PROVED that they are the ONE line of their kind which cannot be overlooked. You should take my tip and display them"

★

They'll ask YOU for

MOORLAND

BRAND

INDIGESTION TABLETS

Let the public see that they can buy Moorlands at *your* Pharmacy

W. B. CARTWRIGHT LTD. RAWDON

The Latest Addition to the Prunol Series



THE SYMBOL OF LIFE
TRADE MARK

PRUNOL PASTILLES

IN TINS, **1/3**

Usual discounts.

NATURE'S FRUIT LAXATIVE FOR CHILDREN AND ADULTS.

SAFE AND SIMPLE.

SPECIAL PRESS ADVERTISEMENTS ARE APPEARING SHORTLY, INTRODUCING THIS NEW LINE TO THE PUBLIC.

PRUNOL PASTILLES in an attractive compact tin. Just the thing to take with one when travelling.

PRUNOL PASTILLES—another way of taking PRUNOL—a way that will appeal to thousands of people who don't like taking jelly. PRUNOL PASTILLES will bring you a whole lot of new business.

PRUNOL PRUNE JELLY is selling well . . . Look to your stocks as our advertising is sending along the Public. To avoid disappointing your Customers order now from your wholesaler.

In Jars, 1/6 and 2/11, and the Popular 9d. Trial Size.

40/- Bonus Parcels, together with Display Carton, Wrapping Paper, and Prunol Booklets, are available through your Wholesale House.

Order from your wholesaler at once.

PRUNOL PRODUCTS, Ltd., 21 Cockspur St., London, S.W.1

'Phone: REGENT 1920. Wires: "PRUNOL, WESTRAND, LONDON."

The Old Strand Chemical & Drug Co., Ltd.

Telephone: ROYAL 8737 (2 lines).
Telegrams:
"OLSTRANKEM, PHONE, LONDON."
Cables: "OLSTRANKEM, LONDON."
Codes: A B C, Western Union, Marconi, Bentley, and Private.

41. Great Tower Street, LONDON. E.C. 3.

TOSCAT
REG? TRADE MARK

DIRECT IMPORTERS

CRUDE DRUGS, BOTANICALS, ESSENTIAL OILS CHEMICALS AND ALKALOIDS

In addition to our usual comprehensive stocks of Crude Drugs and Botanicals of American and Continental origin, we can now give immediate delivery from spot stocks of the following:

ARROWROOT, ST. VINCENT
ADEPS LANÆ, ANHYDROUS, HYDROS
COCCHINEAL, SILVER GREY
,, BLACK SUPER
EPHEDRA (MA-HUANG)
of guaranteed alkaloidal content
GALANGAL ROOT
GRAINS OF PARADISE
HENBANE, EGYPTIAN
HENNA LEAVES
,, POWDER
MUSK ROOT

We are in a position to give prompt delivery both for Home Trade and Export, at below Convention Rates

ACID ACETO SALICYL
AMIDOPYRIN
BARBITONE
CAFFEINE PURE
PHENAZONE
PHENACETIN
PHENOLPHTHALEINE
(finest quality obtainable)

ESSENTIAL OILS

BAY, CASCARILLA, JUNIPERBERRY, OTTO OF ROSE, CHAULMOOGRA OIL

COD LIVER OIL

TONQUIN MUSK IN PODS

VANILLIN 100% for immediate delivery or on contract.

SANTONIN, answering the requirements of all Pharmacopoeias.

CARNEBROS CARNEBROS CARNEBROS CARNEBROS CARNEBROS CARNEBROS CARNEBROS

CARNEGIE

CARNEBROS BRAND

FINE CHEMICALS
PHARMACEUTICAL PRODUCTS

INCLUDING

CHRYSAROBIN

Citrates Salicylates

Ephedrin Podophyllin

QUININE

Strychnine Brucine

SANTONIN

Complete Price List on application.

CARNEGIE BROS.

Phone : Clissold 3560, 2318 227-229 ESSEX RD., LONDON, N.1. *Wires :* "Carnebros London."

WHOLESALE AND EXPORT ONLY

PRODUCTS

CARNEBROS CARNEBROS CARNEBROS CARNEBROS CARNEBROS CARNEBROS CARNEBROS

Wheatrex

THE FOOD WITH A WONDERFUL REPUTATION

for Weaning!

An intermediate food occupying a position between the starch-free foods of Infancy and the normal diet of Childhood and later years.

"WHEATREX" is an ideal milk modifier which in principle encourages the development of the digestive organs by introducing a foretaste of starch in a soluble and easily assimilable form.

Samples always available to the Medical and Nursing professions, and to Chemists who desire to introduce it to their professional clients. On the P.A.T.A. List.

GEO. KING & CO. LTD.
ALBION FOOD MILLS.
SYCAMORE ST.,
LONDON, E.C.1.

Regd. Trade Mark

REI GATE



Telephone : Reigate 480.
Telegrams : Esswhite, Reigate.

RING REIGATE !

The reputation which we have long held for QUALITY with ECONOMY is in itself a valid reason for your enquiries and a guarantee of your satisfaction.
Bear the name REIGATE in mind in connection with—

ESSENCES, ESSENTIAL OILS, SOLUBLE OILS, CONCENTRATES, &c.

A few notable specialities :—



LEMON. Lemon Oil, Soluble Lemon Oil, Terpeneless Lemon Oil, Sesquiterpeneless Lemon Oil.

PEPPERMINT. Peppermint Oil, guaranteed pure. R.S.M. (*Reigate Standard Mint*), English re-distilled & blended.

BLACKCURRANT. Pure Fruit Concentrates of Blackcurrant, Raspberry, Strawberry, Pineapple.

HOP. **Hop Concentrate,** guaranteed pure hops only in purified and condensed form: 1-lb. equals 12-lbs. new hops for brewing purposes.
Hop Oil, distilled from finest English hops only; for flavour and bouquet in chilled and filtered beers.
Hop Extract, a true hop product, for non-alcoholic drinks.

WHITE, TOMKINS & COURAGE LTD

REIGATE

ESTABLISHED 1841

NOTE.—All enquiries regarding Hop Products should be addressed to Head Office : 48 Mark Lane, London E.C.3. Telephone—Royal 1970.

THE HOUSE OF WARRICK

will manufacture, pack or distribute your proprietary upon advantageous terms

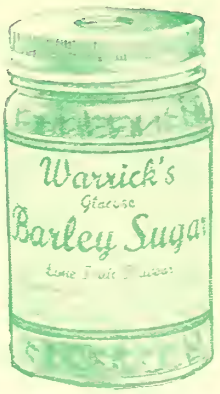
For more than a Century the House of Warrick has met the needs of the trade in a manner which has won entire confidence.

The result of this is now evident in the greatly increased resources available for the manufacture, packing and distribution of Proprietary lines.

Experienced advice is offered, fidelity to formula is guaranteed, and the necessity of strict secrecy is fully realised. The service available includes the manufacture of high-class Pharmaceuticals, Tablets, Capsules, Pastilles, Toilets, etc. — the packing, and, if desired, the distribution.

Quotations for all or any branch of the service will gladly be given.

SOMETHING NEW!



WARRICK'S
GLUCOSE BARLEY SUGAR

Lime flavoured

The Medical Profession recommend it from the health view, and we, from the point of view of profit. Display a few bottles — it is *something altogether different* — sales are assured. The demand is great — please order by return to ensure quick delivery.

per 6/- doz.

Warrick's the Chemists of Quality

WARRICK BROTHERS LTD

The reliable house with more than a century of experience

6 Nile Street, City Road, London, N.1

Telephone: CLERKENWELL 2452 *Telegrams: WARRICKERS, NORDO, LONDON*

You cannot buy better than the Best!

If it's

MALT EXTRACT
OR
MALT & OIL

ask for our samples and prices before buying

PRICE – *RIGHT*
QUALITY – EXCELLENT
and it's
THE MALT THAT CANNOT CRYSTALLISE

Wholesale & bulk enquiries specially invited

JEFFREYS, MILLER & CO. LTD.
LEYLAND MILLS, WIGAN





ATROPINE
BROMIDES
CAMPHOR
CAFFEINE
EMETINE
IODIDES
MERCURIALS
NICOTINE
QUININE
STRYCHNINE
SALICIN
VERMILION
ESSENTIAL OILS
PRUNELLAS

WHIFFEN & SONS LTD

INCORPORATING GEO. ATKINSON & CO. EST. 1654

FULHAM S.W.6
BATTERSEA S.W

CARNWATH RD., FULHAM, S.W.6
FACTORIES at BATTERSEA & FULHAM

Telegrams : "Whiffen, London."
Telephone : Fulham 0037 (3 lines).

Compounded UP TO A STANDARD

(The Highest Possible)

Never DOWN TO A PRICE



these lines are as near perfection in their respective fields as it is humanly possible to get them, regardless of cost or selling price. Your customer requires no persuasion after he has once given our preparations a trial. He then KNOWS they are just what he wants and is interested in no others. In other words—after you make the first sale these goods go on selling themselves.

Alkia Saltrates

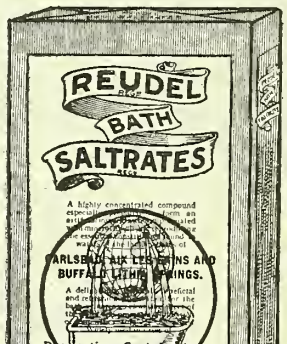
The most efficient Saline on the market and the best value for the money. Pleasant tasting and always satisfies the user. Widely advertised for Rheumatism, Gout, Sciatica, or any Liver, Kidney, Stomach, Intestinal or Blood Disorders, Catarrhal Affections, etc.

Sells at 3/3 (P.A.T.A.).

Reudel Bath Saltrates

The best selling and most fragrant, refreshing, beneficial and all-round satisfactory preparation for the bath—especially recommended for Corns and all Foot Troubles, Rheumatic Pains, etc.

Sells at 1/6 and 2/6 (P.A.T.A.).



YOU CAN STOCK THESE RAPIDLY MOVING LINES ON GUARANTEED SALE TERMS

Carriage Paid in Free Cases in United Kingdom on orders for three dozen, which may be assorted.

Showcards of strong selling power sent free on request.

Write for our Special Terms for Window Display.

DISTRIBUTORS FOR GREAT BRITAIN:—

FASSETT & JOHNSON, Ltd., 86 Clerkenwell Road, London, E.C.1

Australasia—36-40 Chalmers St., SYDNEY, N.S.W. South Africa—15 Bree St., CAPETOWN.

REMEMBER THE SPECIAL BONUS

on this new SCHOLL line

ANOTHER new Scholl line is being introduced. A line to fill a great public need —Dr. Scholl's Foot Bath Salts at 6d. per packet. A perfect product, a popular price, and a name that is known and respected. From now until August 1st a special bonus is available to all dealers ordering Dr. Scholl's Foot Bath Salts. Fourteen saleable packets ordered after the first three dozen. But with this first three dozen you receive three dozen free presentation packets.

Why?

Because—



ANOTHER GREAT SCHOLL WEEK IS COMING

FROM August 9th to the 16th is Dr. Scholl's Zino week—a week of record advertising and free offers. The public will be offered with every packet of Dr. Scholl's Zino Pads a free packet of Dr. Scholl's Foot Bath Salts. Dr. Scholl's Foot Bath Salts will sell on sight—make a window show now and hold your free presentation stock for the great week. Be sure to order good stocks of Dr. Scholl's Zino Pads in preparation for the assured success of Zino week.

THE SCHOLL MFG. CO. LTD.

188-194 ST. JOHN STREET, CLERKENWELL, E.C.1.

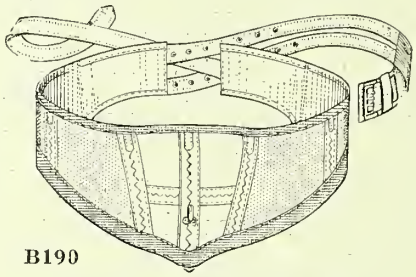
THE R. H. HEWARD COMPANY
CROWN ROAD WORKS
TWICKENHAM
ENGLAND

POPESGROVE 2094 BELTRUSS, Twickenham

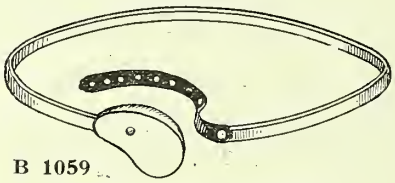
A small selection of Light-weight articles for SUMMER WEAR



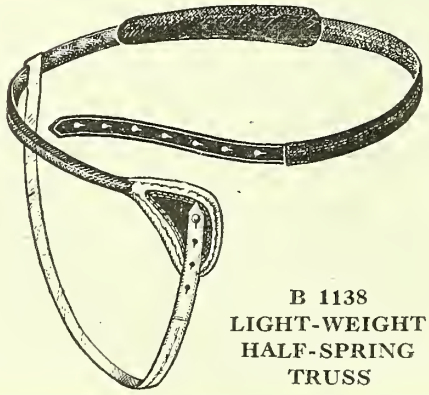
CRÊPE VELPEAU
Many imitations but No Equals



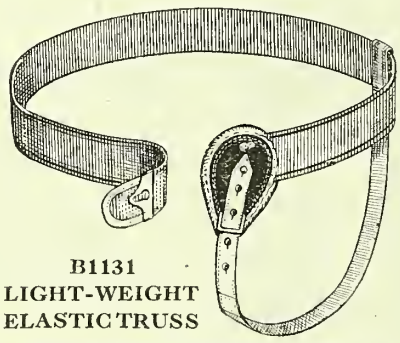
B190
THE "IDEAL" BELT



B 1059
CELLULOID COVERED
BATHING TRUSS



B 1138
LIGHT-WEIGHT
HALF-SPRING
TRUSS



B1131
LIGHT-WEIGHT
ELASTIC TRUSS

WINTER 1930/31

We are making a Special Offer of good

HOT WATER BOTTLE COVERS

WRITE FOR SAMPLE COVER AND PRICES TO-DAY

Contractors to H.M. Government

Established 1850

ARTHUR BERTON LTD.

TRADE MARK

We solicit your enquiries for

PERFECTUM

SURGICAL DRESSINGS

and

CHEMISTS' SUNDRIES

• • • • • • • •

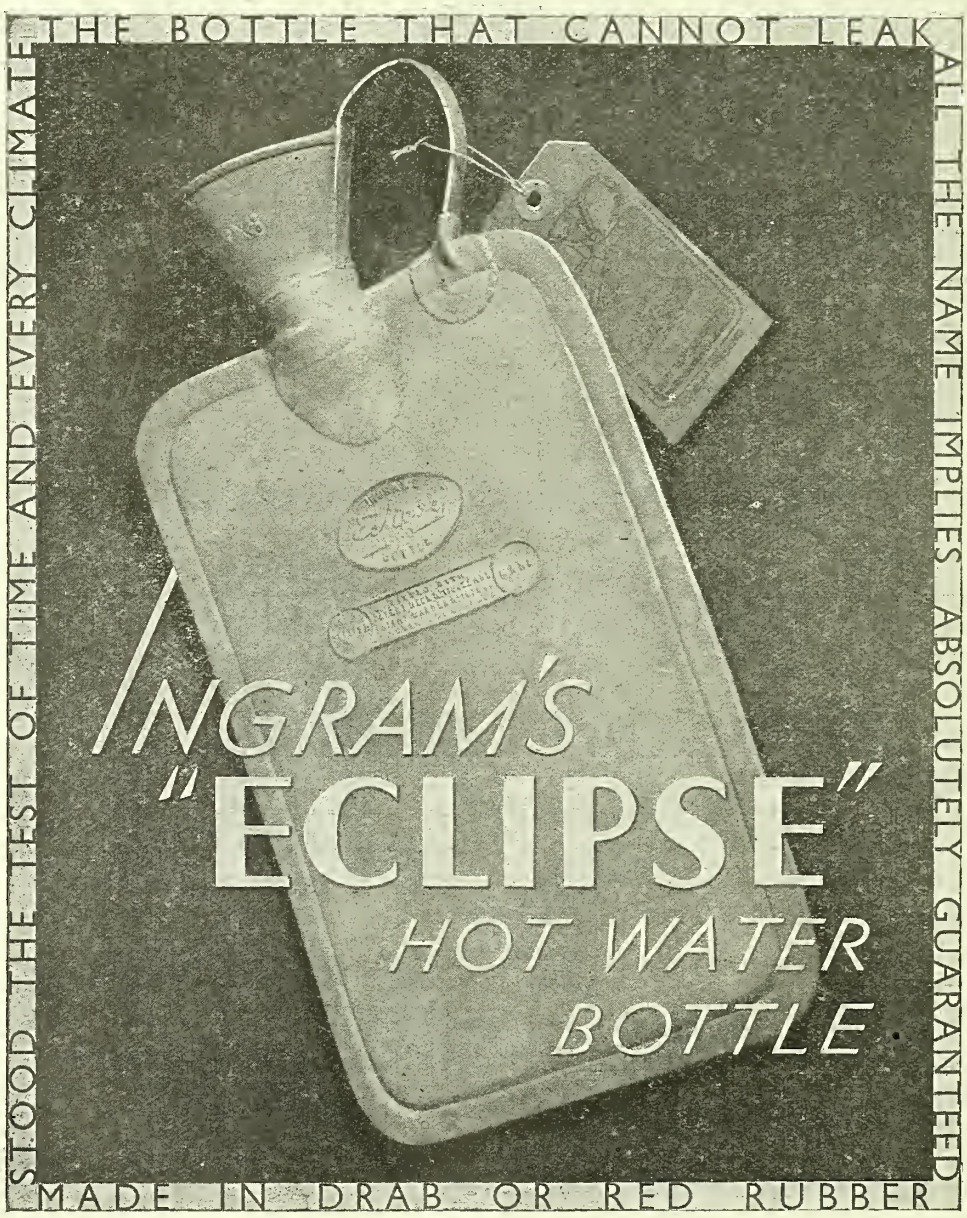
Write for AN APPOINTMENT with our representative for your district, who will be pleased to explain our ATTRACTIVE CONTRACT TERMS to you.

BRITANNIA HOUSE, 256/260 OLD ST.
LONDON, E.C.1

MANCHESTER: 36 CHAPEL ST.

Telephones: Clerkenwell 1346/7/8/9
Tele.: "Aybelim, Finsquare, London."

GLASGOW: 49 JAMAICA ST.



Ingram's "Eclipse" is not a "season" bottle, but is made for real use and long life by experienced and highly skilled rubber craftsmen. The rubber used is '*Ingram Quality Rubber*,' reinforced with specially prepared canvas of great strength.

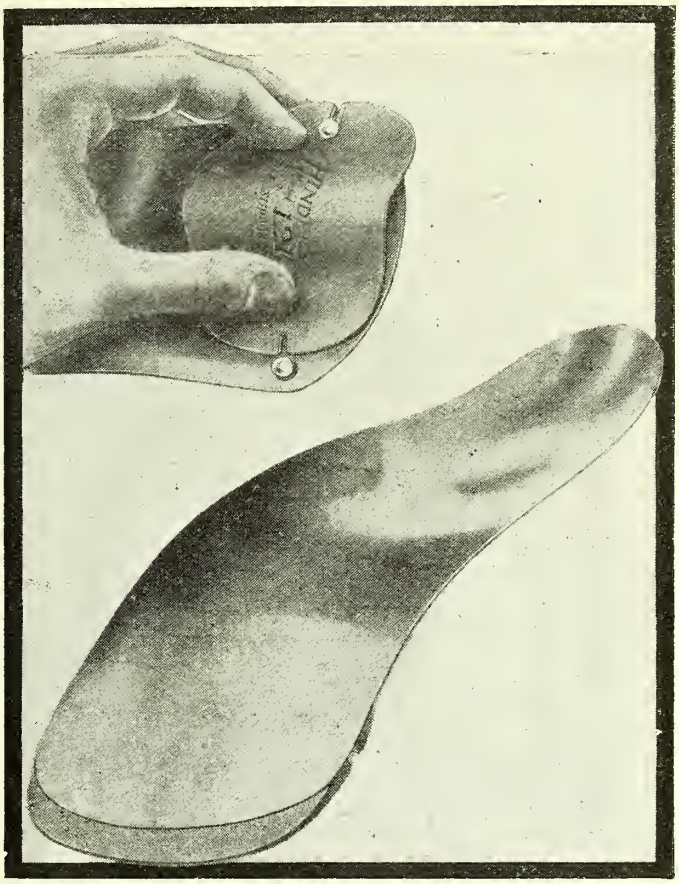
Ingram's "Eclipse" is fitted with the two most important patents in recent years. The Patent Constructed Neck and Patent Washer—which eliminates leaky necks and lost washers. A bottle *you can recommend* to your customers. It is on the P.A.T.A.

J. G. INGRAM & SON LTD., HACKNEY WICK, LONDON, E.9.

Hinders Foot Supports

with the PATENT

REVERSIBLE RENEWABLE PROTECTOR



HINDERS FOOT SUPPORTS have for many years been the "Highest in Merit." They are the strongest and the most comfortable in wear. There is a comprehensive range of models for all conditions, and a catalogue will be sent in response to request. Attractive Window Display features are provided, including mechanical devices.

Hinders ZIX-PADS

THE 'INSTANT RELIEF' PADS WHICH SHOW OVER

38% PROFIT WITH BONUS AND NATIONAL PRESS ADVERTISING

HINDERS ZIX-PADS retail per carton 7½d.
Carriage paid on all orders.

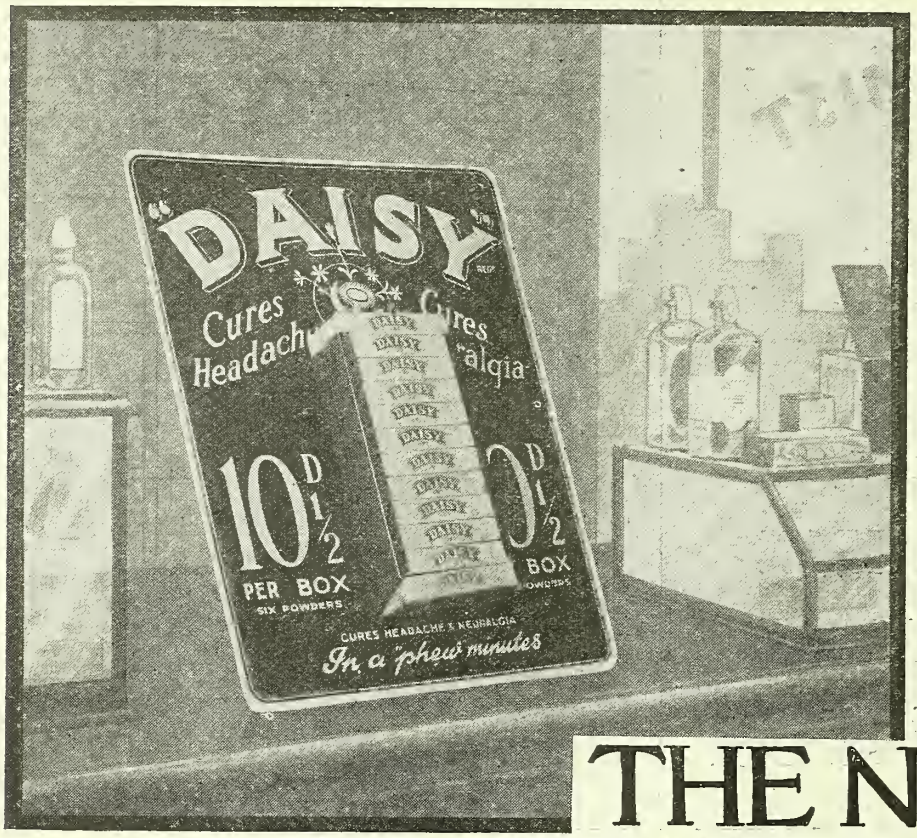
CONTENTS OF CARTONS
8 pads for CORNS or
4 pads for BUNIONS or
4 pads for CALLOUSES



Hinders Limited

174/192 Estcourt Rd., LONDON, S.W.6

Largest Makers of Foot Appliances entirely British



THE NEW SEMI-AUTOMATIC CONTAINER PROMOTES DAISY SALES

P.A.T.A. PRICES

10½d.

Boxes containing

6 powders

◆

7/10½

Per dozen boxes

Daisy Powders can now be displayed in the novel form illustrated above. This new device is a combination of an attractive Show Card and a Semi-Automatic Container which holds one dozen 10½d. Packets. Each time a packet is withdrawn from the bottom, another packet slides into position, ready to be handed to the next customer. Neat and convenient, the Semi-Automatic Container links up the shop with Daisy advertising, catches the eye of chance customers, and helps to increase sales. A Daisy Showcard Container will be sent post free with each order for One dozen packets

DAISY LTD. HORSFORTH, LEEDS



HERE IS A VERITABLE TRADE MAGNET

Every woman is intensely interested in stockings. Stockings have become one of the most important items of her wearing apparel. It is readily understandable, therefore, how Dyanese Stocking Dyes immediately appeal to a woman.

Here is the means at negligible expense of keeping her stockings to the latest and most fashionable shades. Faded stockings, too, become just like new by just rinsing in this wonderful Dye.

Dyanese Stocking Dyes sell like the proverbial hot cakes—ask any chemist who is displaying them—moreover, they bring the womenfolk into your shop.

Women talk about these remarkable dyes—they send their friends also to you for supplies.

DYANESE

COLD WATER STOCKING DYE

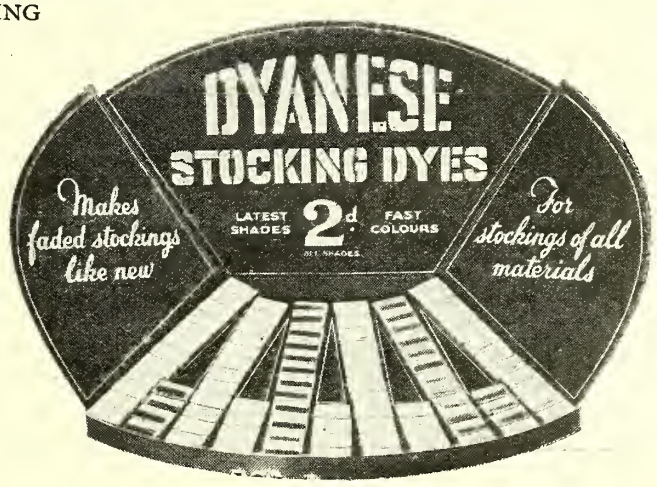
MAGNIFICENT SELF-ILLUMINATING DISPLAY CABINETS.

For a strictly limited period we will supply one of these superb and costly cabinets, fitted with dummies, with every order for one gross Stocking Dyes (costing but 16s. 9d., carriage paid).

Dyanese Stocking Dyes are one of the most spontaneously popular lines ever offered to the retail chemist.

Send your order to-day, either direct or through your regular wholesaler. Price, 16s. 9d. per gross, carriage paid.

*The best way to buy Dyanese Stocking Dyes is first to get the assorted one gross display carton, which contains an assortment of all shades, together with suitable shade charts. Repeats may be had as required in any shade from all wholesalers or direct.



Sole Agents for Dyanese Dyes :—

J. E. ELLIS, LTD.,
Horsforth - - LEEDS.

CHEMISTS' TRANSFERS

Messrs. **ORRIDGE & Co.**

56 LUDGATE HILL, E.C.4

TELEPHONE: CITY 2283. (ESTAB. 1846.)

May be consulted at the above address on
SALES, PURCHASES & VALUATIONS

VENDORS

Vendors have the advantage of direct attention and advice as to value without additional fee.

PURCHASERS

Purchasers who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

VALUATIONS

Valuations having always been a prominent feature, Messrs. Orridge and Co. trust that the lengthened period during which they have enjoyed the confidence of the Profession will be regarded as sufficient proof of their endeavours to conduct these transactions in an honourable and straightforward manner.

VALUATIONS FOR STOCKTAKING

Messrs. Orridge & Co. desire to emphasize the necessity of a periodical Statement of Account, by which means alone *Profit, the Value of Business, etc.*, can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted, and eventually becomes the cause of *confusion and loss.*

Messrs. Orridge & Co. are prepared to undertake these essential duties, and will make *Special Terms* for such services.

N.B.—NO CHARGE TO PURCHASERS

Terms for Valuation on application. Appointments by post, wire, or telephone have immediate attention.

SPECIAL NOTICE. **Messrs. ORRIDGE & CO. have usually a large number of Businesses for Sale suitable for Gentlemen with capital, from £500 to £5,000.**

ORRIDGE & CO., 56 Ludgate Hill, E.C.4

ADVERTISING CAMPAIGN NOW IN FULL SWING

backed up by clever window shows

SEND FOR SPECIAL WINDOW DISPLAY TERMS



Quin-Quenna

"Better than a Shampoo"

P.A.T.A. PRICES TO THE PHARMACIST

2/- doz. **4/-** doz. **8/-** doz.

14 Packets to the Dozen

PACKED IN ATTRACTIVE DISPLAY OUTERS

Supplied in the following varieties:—

ROSEMARY	retail @	3d. &	6d.
HENNA	- ,,	..	..	6d.
EGG	- ,,	..	..	6d.
TAR	- ,,	..	..	6d.
NURSERY	- ,,	..	..	3d.
PINE	- ,,	..	..	6d.
CAMOMILE	,,	..	..	6d.
PEROXIDE	,,	..	..	1s.

WILLIAM EDWARDS and SONS

14-18 Nile Street
City Road
LONDON, N.1

ANNOUNCING

AN IMMEDIATE REDUCTION IN PRICE

of the present Standard 3-Hole

Darwin

Safety Razor Blades

NEW RETAIL SELLING PRICES

3/4 per packet of 10 1/8 per packet of 5

This reduction makes it possible for Retailers to sell at a Popular Price a blade which is recognised to be in the luxury class

ALSO ANNOUNCING
AS AVAILABLE FROM JULY 1ST

A NEW DE LUXE BLADE

REGº DESIGN 753467



NON-RUST BLADE

TO RETAIL AT

4/6 per packet of 10 2/3 per packet of 5

The new De Luxe Blades are a still further advance on the Standard Blades which have already earned the reputation of being the World's Best

The Blades are non-rusting and will give an even greater shaving comfort and efficiency than ever before. They are designed to fit the old 3-peg type :: :: :: :: and the new bar type of holder :: :: :: ::

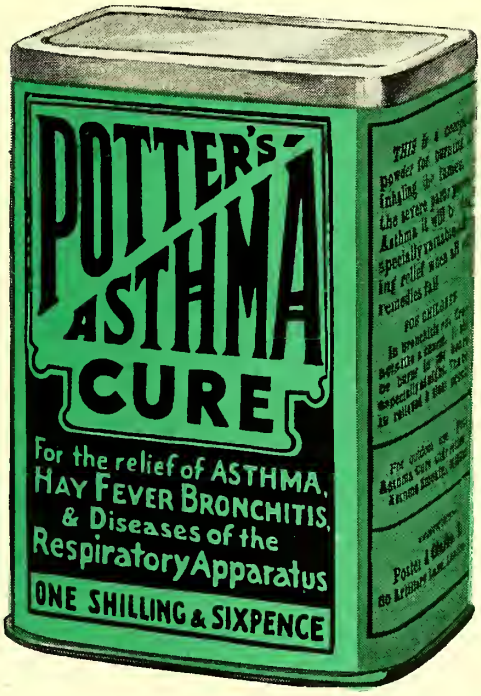
THIS BLADE HAS INHERENT RUST-RESISTING PROPERTIES

The present Generous Scale of Trade Discounts still prevails

DARWINS LIMITED, Fitzwilliam Works, SHEFFIELD

POTTER'S ASTHMA CURE

Potter's Asthma Cure has found its public, and is being widely advertised at home and abroad



Potter's Asthma Cure stands alone for efficacy. Purchase your supplies direct from us or through your usual wholesaler

POTTER & CLARKE Ltd.

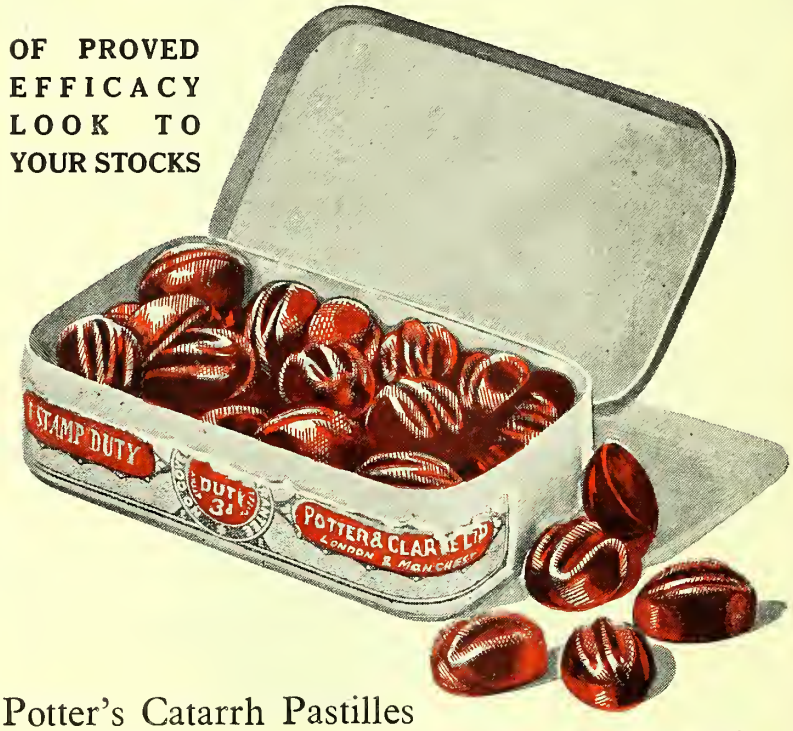
Phones: Bishopsgate 4761 (5 lines). Grams: Horehound, Phone, London (2 words)

60/64 ARTILLERY LANE, LONDON, E.1

Manchester: 24 LUNA STREET, GREAT ANCOATS

POTTER'S
CATARRH PASTILLES

OF PROVED EFFICACY LOOK TO YOUR STOCKS



Potter's Catarrh Pastilles are of outstanding merit, and the public confirm this statement. There is good business and : : : profit for you in this line : : :

P.A.T.A. 1/3. Per Doz. 11/- In Boxes of ½ dozens

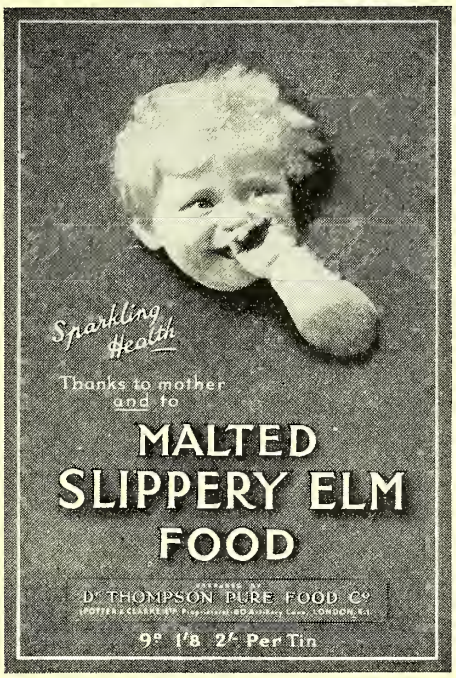
POTTER & CLARKE LTD.

60-64 ARTILLERY LANE
LONDON, E.1
MANCHESTER: 24 LUNA ST., GT. ANCOATS

Phones: Bishopsgate 4761 (5 lines) Grams: Horehound, 'Phone, London

POTTER & CLARKE LTD.

60/64 ARTILLERY LANE, LONDON, E.1
Phone : Bishopsgate 4761 (5 lines). Grams : "Horehound, Phone, London"
And at 24 LUNA STREET, GREAT ANCOATS, MANCHESTER
Phone : City 0?8. Grams : "Horehound. Manchester."



This remarkable Food has been described as the most nourishing in the world. It has a beneficial and soothing effect in all cases of gastritis, colitis, etc.

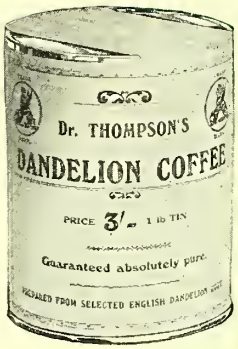
FREE SAMPLES FOR COUNTER DISTRIBUTION.

9d. tins..6/6 doz. 1/8..15/- doz. 2/-..1/6 each. P.A.T.A.

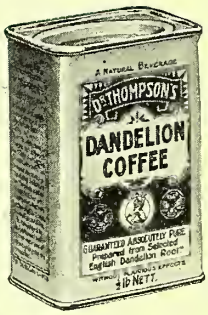
MALTED SLIPPERY ELM COCOA

4 oz. 1/- P.A.T.A. 8/- doz.
Free samples, showcards and dummies.

Dr. Thompson's DANDELION COFFEE



Composed entirely of English Dandelion Root, roasted and ground. No Chicory or other foreign ingredients. Its advantages to Dyspeptics and all with weak digestions : : is unequalled : :



1/-	LEVER	LID	TINS	P.A.T.A.	**8/-**	doz.
1/9	,,		,,	,,	**15/-**	,,
3/-	,,	lb.	,,	,,	**26/-**	,,

Dandelion Coffee Essence

¼lb. Bottles, retail 9½d., 7/6 doz. ½lb. Bottles, retail 1/2, 10/- doz.

POTTER & CLARKE LTD.

60/64 ARTILLERY LANE, LONDON, E.1
Phone : Bishopsgate 4761. Grams : "Horehound, Phone."
and at 24 LUNA STREET, GT. ANCOATS, MANCHESTER
Phone : City 6048. Grams : "Horehound, Manchester."

ESSENTIAL OILS

DISTILLED IN OUR OWN LABORATORIES UNDER EXPERT SUPERVISION

We have equipped our Laboratory with the most modern plant and can offer you, at attractive prices, Essential Oils for use by soap, perfumery and essence makers

Samples and Quotations on request



POTTER & CLARKE Ltd

Drug Merchants-Manufacturing Chemists

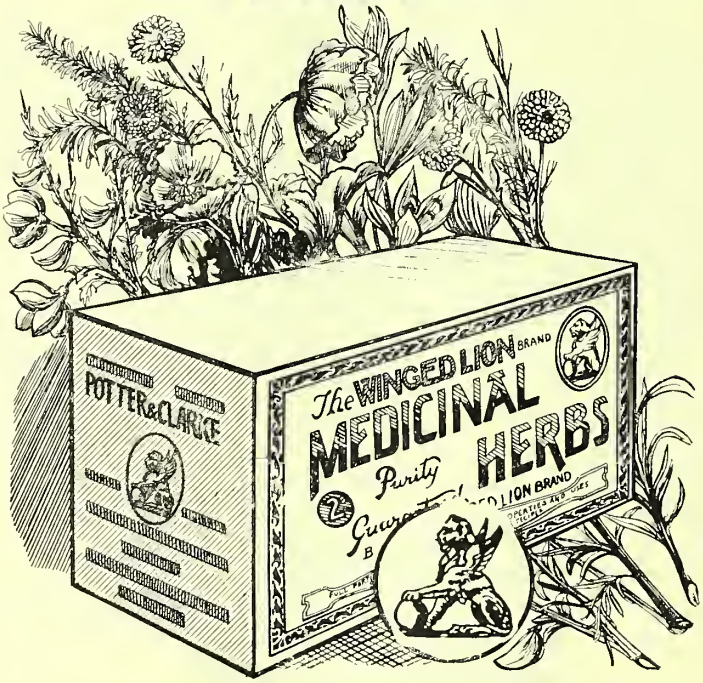
60,62,64, ARTILLERY LANE, LONDON, E.1

Phone: Bishopsgate 4761-5 lines. Grams: Horehound, phone London (2 words.)

and, **24, LUNA ST. GT. ANCOATS ST. MANCHESTER**

Phone: Manchester City 6048 Grams Horehound, Manchester.

HERBS IN PACKETS



Have the Largest Sale of any Brand in the United Kingdom

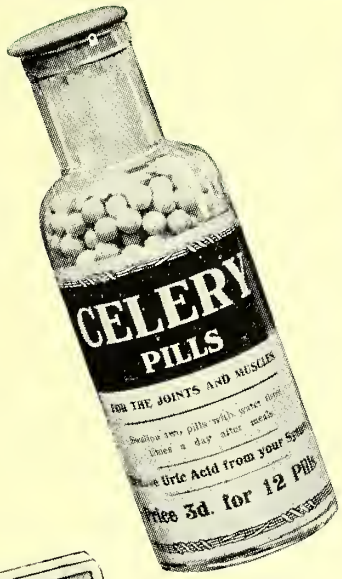
2d. Medicinal Herbs 1/4 dozen, 15/- gross
1½d. Culinary Herbs 1/1 ,, 12/- ,,

POTTER & CLARKE LTD.
60-64 ARTILLERY LANE, LONDON, E.1
ALSO
MANCHESTER 24 LUNA ST. GREAT ANCOATS

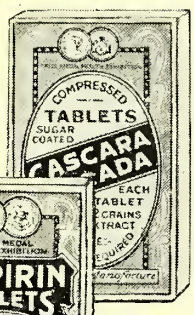
Phones: Bishopsgate 4761 (5 lines) Grams: Horehound 'Phone London

PILLS & TABLETS

PACKED & BULK





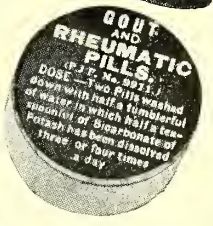












PRICES, QUOTATIONS

— & —

SAMPLES on REQUEST

Our factory is equipped with the most up-to-date plant and is under expert control

Ask for our Price Lists

POTTER & CLARKE Ltd

Drug Merchants-Manufacturing Chemists

60,62,64, ARTILLERY LANE, LONDON, E.1

'Phone: Bishopsgate 4761-5 lines. 'Grams: Horehound, phone London (2 words.)

and, **24, LUNA ST. GT. ANCOATS ST. MANCHESTER**

'Phone: Manchester City 6048 'Grams Horehound, Manchester.



PRICES

Potter's Vitalising
FRUIT SALINE

8 oz. bottles (retail 1/9) 13/- dozen
4 oz. bottles (retail 1/3) 8/6 dozen
Attractive show matter with all orders.

All the Year Round
HEALTH SALT

4 oz. tins	... ...	4/9 dozen
Gross lots	... ...	4/3 dozen
1/- Bottles (4 oz.)	...	7/6 dozen
1/6 Bottles (8 oz.)	...	12/- dozen

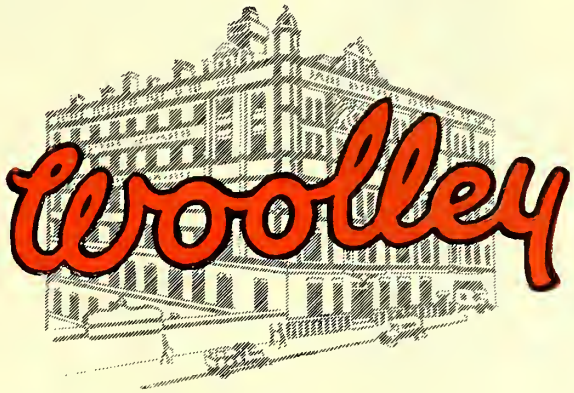
Clarke's
LIVER SALTS

4 oz. tins	... ...	5/- dozen
3 Dozen lots	... ...	4/9 dozen
1 Gross lots	... ...	4/6 dozen

Handsome Showcard with all orders

POTTER & CLARKE LIMITED
Drug Merchants—Manufacturing Chemists
60, 62, 64 ARTILLERY LANE, LONDON, E.1.
Phone:-Bishopsgate 4761-5 lines. Grams:-Horehound, phone London, (2 words.)
and **24, LUNA STREET, GREAT ANCOATS STREET, MANCHESTER**
Phone:-Manchester City-6048. Grams:-Horehound, Manchester

TRADE MARK TRADE MARK



for

GALENICALS, DRUGS, SUNDRIES
SURGICAL & HOSPITAL REQUISITES
PROPRIETARY ARTICLES
PHOTOGRAPHIC GOODS

QUALITY
and
SERVICE

Enquiries for all Pharmaceutical requirements are invited.

JAMES WOOLLEY
SONS & Co, Ltd
VICTORIA BRIDGE, MANCHESTER

W.J.A.

F F



INFANTS or ADULTS!—The Gem registers any weight with scrupulous accuracy from one pound to twenty stones.

AGENTS—

LONDON	Herbert & Sons, Ltd., 6/7 West Smithfield, London, E.C.1 206 Goswell Road, London, E.C.1.
„	S. Maw, Son & Sons, Ltd., 7/12 Aldersgate Street, London, E.C.1.
„	Shefras Novelty Co., Fetter House, 54/55 Fetter Lane, London, E.C.4.
LIVERPOOL and MANCHESTER	Berry & Warmington, Ltd., 28/37 Byrom Street, Liverpool. 40 Thomas Street, Manchester.
IPSWICH	The Eastern Scale Co., Ltd., Crown Street, Ipswich.
NEWCASTLE-ON-TYNE	Mordue Bros., Ltd., 67 Newgate Street, Newcastle-on-Tyne.
CARDIFF	Preston & Thomas, Ltd., 18 Caroline Street, Cardiff.
SHEFFIELD	Charles Ross, Ltd., Aizlewood Road Works, Sheffield.
SOUTHAMPTON	C. A. Wedderburn & Co., 54 Bernard Street, Southampton.
BELFAST	W. R. Simpson & Son, Ltd., 27/28 Smithfield Square, Belfast.

FOR SCOTLAND AND EXPORT:
The Gem Automatic Weighing Machine Co., Ltd., 48 New City Road, Glasgow, C.4.
Applications are invited for the Gem Agency Abroad and throughout the Empire.

This GEM drew over £30 in one month!

AT the well-known Scottish watering resort, Dunoon, the drawings from one Gem were over £13 in one week, the total for a single month being over £30.

The above is only one of the many instances brought to our notice of the remarkable earning powers of the Gem.

LET THIS GEM MAKE MONEY FOR YOU!

The GEM Machine, with its beautiful lines, enhances the appearance of any Chemist's or Druggist's Shop. It is a genuine money-maker, and works for you without attention.

AND A PROOF OF ITS QUALITY!

The Gem has just been purchased by the Corporations of Glasgow and Blackpool.

The finish is in first-class cellulose in three standard colours, mahogany (grained), light blue and royal blue—with chromium-plated untarnishable metal Bezel and penny top.

Ask our nearest Agent to demonstrate the Gem. Get particulars of the attractive terms of purchase.

The GEM

Automatic Weighing Machine Co. Ltd.
46, NEW CITY ROAD. GLASGOW. C.4

NEW PRICES · GREATER PROFITS

BRANDRETH'S PILLS (UNCOATED)

55% profit on cost.

DOUBLE THE PROFIT ON OTHER LAXATIVES.

NEW PRICES—

Wholesale, 9/- per dozen. Retail, 1/2- per box.

Brandreth's ensure steady profitable sales and have been famous amongst the Medical Profession since 1759 as containing the finest laxative formula.

Each 2 grain Pill contains:—

Solid Extract of Sarsaparilla.	Gum Guiac.	Gum Gamboge.
Colocynth.	Gum Arabic.	Socotrine Aloes.
	Curacao Aloes.	White Castile.
	Capsicum.	

Recommend them always when asked for a laxative.

SUGAR COATED — New Wholesale Price 11/- per doz. Retail 1/3 per bottle.

ALLCOCK'S POROUS PLASTERS

50% profit on cost.

Known the World over as the finest and most efficacious Porous Plaster made.

Recommend Allcock's to your customers whenever a Plaster is asked for, and enjoy the splendid profit margin which they allow.

Write for particulars of New Sales Plan with free advertising for your business.

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SANDALWOOD OIL

Distilled from SANTALUM ALBUM. *linn.*
at the MYSORE GOVT. FACTORIES



MINIMUM 90%
ACTUAL SANTALOL
For further information apply

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GRAND BUILDINGS
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REGD.

HEALTH IRRADIATED STRENGTH

VITAMIN MALT

This Preparation is a guaranteed product and contains the Essential Vitamins in a convenient form. It is pleasantly flavoured, and can be given to young and old with perfect safety and assured benefit. Where Cod Liver Oil and preparations thereof cannot be taken, "Strenthol" Vitamin Malt will be found of great value.

"STRENTHOL" contains a body-building Oil, Fruit Juices, and Irradiated Ergosterol in combination with Malt Extract prepared from Malted Barley of high-class quality. The Irradiated Ergosterol is standardised to equal a Vitamin D content of 20 per cent. of Cod Liver Oil, and the whole preparation is guaranteed in quality and purity. It has been proved that Vitamins have a very important bearing on general health and well-being, especially in the growing child, and the whole aim in producing "Strenthol" Vitamin Malt has been to give a splendid Health-Giving and Strength-Building preparation of guaranteed materials to the public at a moderate price. Children will thrive on it, and it has proved a wonderful food tonic after Influenza and other ailments.

ASK FOR

"Strenthol" Vitamin Malt

(Irradiated)

Prices–1-lb. jar, 1/9. 2-lb. jar, 3/– 4-lb. jar, 5/–

See that each jar STEENBOCK PROCESS E.P. 236197 *bears this design*

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Manufacturing Chemists

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J. M. SMITH & CO. (LONDON) LTD.

ESTABLISHED 1860

With over 60 years' reputation as Manufacturers of Dependable Lines
OFFER TO THE RETAIL PHARMACISTS
FOR A SHORT PERIOD ONLY

MORE PROFIT!!

FOR THE SUMMER TRADE IN

DISINFECTANTS

Two SPECIAL OFFER parcels showing an incredible increase in profit to the retailer without raising existing prices to the public.

Write for particulars to :—

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BESORBON

(Dr. Hill's Formula)

MEDICINAL SNUFF. ABSOLUTELY THE FINEST REMEDY FOR CATARRH & COLD IN THE HEAD.

Richard Dickeson & Co. *(Incorporated with Reynolds, Sons & Co., Ltd.)* 57-59 CHARTERHOUSE STREET, LONDON, E.C.1.



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With inscriptions in any desired tint ; also Plain or Embossed.
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These Cachets are especially adapted for Headache, Neuralgia and other powders.
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THE WONDER OINTMENT FOR ALL ANIMALS.

1/6 Size	- -	12/- per dozen
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5/- ,,	- -	40/- ,, ,,

CHERRY'S SLUMBER TEA

A Herbal Remedy with an Excellent Name.
A REAL CURE FOR CONSTIPATION AND BILIOUSNESS.

1/3 Size	- -	9/- per dozen
3d. Sample Size		2/- ,, ,,

Sole Proprietors : ***Your enquiries are invited and appreciated***

CARTER BROTHERS, SHIPLEY, Yorks.

Normo-Gastrine

(Specially prepared Silicate of Aluminium)

THE successful new remedy for Indigestion and Dyspepsia, Gastric Ulcers, Gastritis, Gastro-Intestinal Flatulence, etc. **Relieves in twenty minutes** and effects a permanent cure in the most severe cases.

NORMO-GASTRINE is equal to Bismuth Salts, Magnesium and Sodium Bicarbonate with the added advantage that it does not render the Stomach contents alkaline or evolve Carbonic Acid.

Its astringent and antiseptic properties are produced only when acted upon by Hydrochloric Acid of a greater strength than 0.15% and thus, while an excess of acidity in the Stomach is neutralised, the amount necessary for Peptic digestion is undisturbed. **A solution of 0.28% Hydrochloric Acid will be reduced to 0.15%, the normal amount present in the gastric contents of the Stomach, in twenty minutes.**

When acted upon by Hydrochloric Acid, NORMO-GASTRINE forms a semi-colloidal precipitate which forms a protective film, both healing and absorbent, over the inflamed or ulcerated surfaces of the Stomach.

Presented in gr. 10 tablets, tasteless and odourless.

Boxes of 50	P.A.T.A.	Boxes of 100
12/- *per doz.*	**1/6 and 2/9**	**20/9** *per doz.*
Less 25%		*Less* 25%

In showouters of 1 dozen with effective 3-panelled window screen. Posters for out-door display may be had if required and members of the medical profession circularised on receipt of names and addresses.

NORMO-GASTRINE will secure for you the appreciation of satisfied customers, the sure basis of increased business.

Testimonials in our possession are convincing proof that if applicable to any medicine, the word "infallible" might well be used to describe this product.



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LONDON, E.6 = = = = Est. 1741

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Wholesale & Export Druggists
Manufacturers of Pharmaceutical Preparations

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Made from Chemically and Physiologically tested Drugs

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LIMITED

ACTUAL MANUFACTURERS OF—

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The following are a few of Brady & Martin's Registered Preparations which have a large sale :—

HEPATISAL, KRITHOL
SEPTOPHON DUSTING POWDER
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PHARMACISTS OF THE NORTH

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½-OZ. TINS - TO - TONS

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TROPICAL COLD CREAM

AND

OINTMENTS FOR EXPORT

Hydrogen Peroxide
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LAXAGAR (BRAND) EMULSION

65% LIQUID PARAFFIN WITH AGAR-AGAR

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WE CATER FOR EVERY POSSIBLE REQUIREMENT OF THE PHARMACIST

TOILET AND MEDICINAL PREPARATIONS
IN VARIOUS PACKS OR IN BULK

YOUR ENQUIRIES WILL BE APPRECIATED

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ESTABLISHED NEARLY A CENTURY

Standardised Tinctures
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Special Preparations

MIST. PEPSINÆ CO. c. BISMUTHO (Hewlett's), 12/6 lb.
Packed, for Dispensing only, in 5, 10, 22, 40 and 90 oz. bottles.

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Packed, for Dispensing only, in 5, 10, 22, 40 and 90 oz. bottles.

Antiseptic Cream. Antithermogen. Hæmorrhaline. Hormonigen
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HEWLETT'S LYSOL
Supplied bearing your own Name on orders of 3 dozen bottles.

Surgical **"CREOSALGEN"**
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Mixing bright and clear in water, contains 50% Cresols. "Possesses a higher germicidal value than carbolic acid, and probably nearly three times as high."—*The Lancet.*

In 4 oz. bottles, **5**/- doz.; 8 oz., **9**/- doz.; 16 oz., **15**/6 doz.; 20 oz., **20**/- doz.; 32 oz., **27**/- doz.

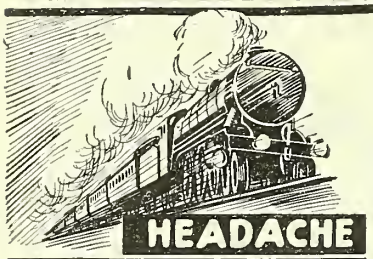
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WE HAVE A LARGE DEPARTMENT OF NEW & INTERESTING
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Sole proprietors of the "Charlotte" Hot Water Bottle Cover (Registered)

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Steady progress and increasing sales on the market for over 17 years prove that this reliable remedy is swiftly and consistently coming to the fore.

Backed up by carefully planned advertisements appearing in over fifty well-known and well-read daily and weekly papers, Express Powders are being made known to more than five million people, and are widely used and appreciated in over two-thirds of the country.

Pharmacies in this area can do big business in Express Powders, making for satisfied customers and greater profits.

This approved remedy can be recommended with perfect confidence and safety!

NOTE REVISED PRICES AND PACK

Sizes -	1/3 box	3/- box containing 22 powders	Box for opening containing 45 Powders at 2d. each	Box for opening containing 110 powders at 2d. each
Prices -	11/6 per doz.	30/- per doz.	5/- each	12/- each
Profit - Yielded	3/6 per doz.	6/- per doz.	2/6 each	6/4 each

Special Prices upon application for **£5, £10,** *and* **£25** *Parcels.*

London Distributors: **MAY, ROBERTS & CO., LTD., 7-13, Clerkenwell Road, E.C.1. SANGERS, LTD., 42a, Hampstead Road, N.W.1.**

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MALT EXTRACT
(AND COMBINATIONS)
FOR ALL PURPOSES
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Malt Extract Makers,
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Pharmaceutical Preparations

FEROCAL AROMATIC APERIENTS
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Price List on Application

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Reliable House for all Pharmaceutical Preparations and for Personal Service

Concentrated Waters.
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Essential Oils.

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Liquid Extracts.
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For 50 YEARS
Specialists in
FLAVOURS
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We suggest it would be decidedly to your advantage to obtain sample and quotation from:

McCLURE, YOUNG & Co., Ltd.
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ESTABLISHED 1750

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ANTISEPTIC DUSTING POWDER.
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An organic compound of Bismuth and Birch Tar.
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For use in place of Poultices in cases of congestion and inflammation.
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TROPELS—COMPRESSED PELLETS
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VITALAX.
VITAMIN MALT.
VITANO.
A Restorative. Beef, Malt, and Port Wine.
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(Cough Balm).
WYLETTES.
Wylettes are hermetically sealed sterilised glass capsules, containing 1 c.c. of a sterilised liquid ready for immediate hypodermic injection. Any combination can be made.

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DURAPLASTIC COATED HORSE BALLS.

Full list of Drugs, Capsules, Compressed Tablets, Tropels, Gelatine and Pearl Coated Pills, Packed Goods, Veterinary Medicines and Duraplastic Coated Horse Balls.

Post Free on Application.

The 'Aspro' Review

17% Extra Profits. "British to the Core" New Series. Display Features.

Send COUPON below for this New 'ASPRO' Window Display



Printed in ten colours

By featuring 'ASPRO' Displays in your window you link up your store to the largest Medicine Publicity Campaign in the World

Following the success of our recent Man-Nurse and Child Display for Chemists and the many letters of appreciation received we have pleasure in announcing a new 3-piece series now ready for distribution. These productions combine suggestion and reasons why customers should enter your store to purchase 'ASPRO.' The sooner you co-operate by featuring 'ASPRO' Displays—the greater is your opportunity of benefiting by the consumer demand created by our huge advertising campaign. Be first in the field by showing this new 3-Piece Display. Simply fill in name and address and post to Gollin & Co. Pty., Ltd., "Aspro" Dept., Slough, Bucks. The displays will be despatched to you promptly.

17% Extra through buying 'ASPRO' on Bonus Terms.

The 'ASPRO' bonus on unstamped 'ASPRO' is as follows:— On a one gross order for 10's the bonus is one dozen packets; on half-gross order, ½ dozen packets. Half-gross 10's is the minimum order accepted for Bonus purposes. On a 1 gross order for 27's the bonus is 2 dozen packets, on a half-gross order 1 dozen packets, and on a quarter-gross order ½ dozen packets. A quarter-gross order is the minimum quantity. There is no bonus on 5's or 60's.

The conditions are that the Chemist who buys on these terms undertakes to display 'ASPRO' Advertising matter in his shop window for 14 days, and sell at advertised prices. As 'ASPRO' is so extensively advertised, this action will not only bring customers into the Chemist's shop to purchase 'ASPRO,' but should enable the chemist's staff to make other sales to these customers. Acceptance of Bonus is considered acceptance of conditions regarding display and selling prices. For Bonuses it is not necessary to buy both sizes at the same time, i.e., single lots 6 dozen 10's or 3 dozen 27's will qualify the Chemist.

You order as follows:—We do not sell direct to the Chemist. All our business goes through Wholesalers. Orders may be sent either to your Wholesaler or direct to us. If to us, state the name of your Wholesaler, so that we may forward the order on and the Bonus will be supplied direct by us.

Ordinary prices for unstamped 'ASPRO' are as follows:—

3d. size (containing 5 tablets) 2/3 doz.
6d. „ (containing 10 tablets) 4/6 „
1/3 „ (containing 27 tablets) 11/6 „
2/6 „ (containing 60 tablets) 21/- „

Less 2½% 30 days.

NOTE.—The 1/3 size contains two extra tablets. 2/6 size ten extra tablets.

'ASPRO' consists of the purest Acetyl Salicylic Acid that has ever been known to Medical Science, and its claims are based on its superiority.

Made by ASPRO LIMITED, SLOUGH, England.

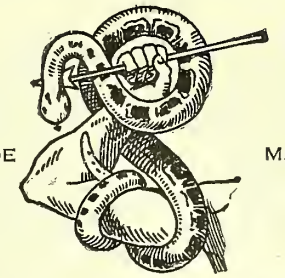
Agents:
GOLLIN & CO. PTY. LTD.
('Aspro' Dept.),
SLOUGH, BUCKS.
'Phone: Slough 608.

No proprietary right is claimed in the method of manufacture or the formula.

ASPRO REG. TRADE MARK

COUPON for New 3-Piece 'ASPRO' Display.
GOLLIN & CO. PTY. LTD. ('Aspro' Dept.), SLOUGH, BUCKS.
Please send me above displays.
Name.....
Address.....
.....

C.&D.



RASPBERRY

FROM FRUIT

VINEGAR

GUARANTEED

1. To meet the requirements of the Food and Drugs Acts and the New Pure Food Regulations.
2. To be manufactured from Pure Fruit Juice and Cane Sugar.
3. To contain no preservatives or artificial flavourings.
4. To keep indefinitely without fermentation or deposit.

Supplied only in Casks, Carboys and Winchesters.
SAMPLE ON APPLICATION.

ESTABLISHED 1786

J. C. ARNFIELD & SONS, Ltd.

Wholesale and Export Druggists

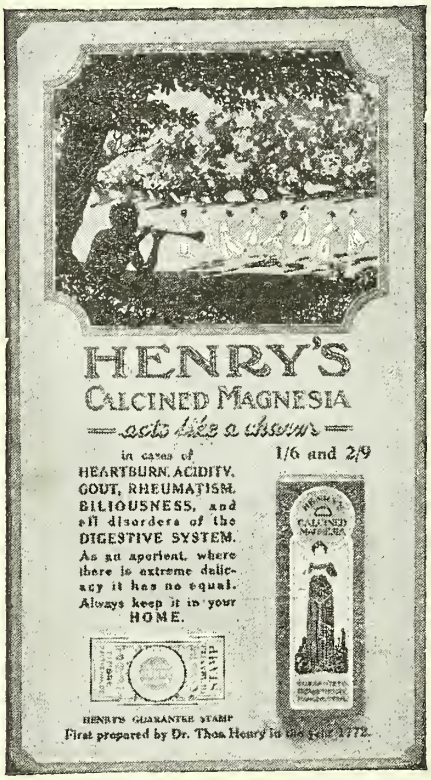
Gadsby Works, Princes Street, STOCKPORT

A very Old Friend
- in a New Guise -

HENRY'S CALCINED MAGNESIA



The New Carton



The New Showcard

THE identity of Henry's Calcined Magnesia has been for some five generations so associated with a certain familiar appearance that a change of packing in conformity with current ideas of selling calls for emphasis from time to time to protect pharmacists, the public, and the genuine preparation.

Special attention is therefore drawn to the above carton so that its appearance may be well noted.

Apart from this merely external change the merits of this well-known and acknowledged remedy are absolutely unaltered, and it remains the only Magnesia guaranteed to be free from Carbonic Acid Gas—points of the utmost importance to the distributor and user.

We will gladly send show-cards and advertising matter on request. Send p.c. for trade terms.

Thos. & Wm. HENRY
Manufacturing Chemists,
11 East St., MANCHESTER

Puretest Pharmaceutical Products

give the Rexall Chemist an increasingly popular range of quick selling counter lines, appealing both to the Chemist, his staff and his customers. The Puretest Preparations are easily distinguishable both for quality and pack, and millions of pleased customers are willing to pay a little more for the Puretest super quality Epsom Salts, Puretest Tablets, Puretest Liquid Paraffin and the complete range.

All Puretest and Rexall preparations are made in England and distributed by United Drug Company Limited, Nottingham. If there is no Rexall Agent in your district, and you would like to know why Rexall selling methods are proving so successful write to:—

UNITED DRUG COMPANY LTD.,
NOTTINGHAM.



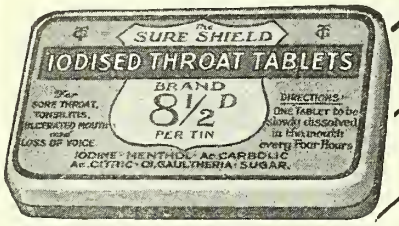
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THE SURE SHIELD

LONDON DEPOT:
1 SWAN STREET,
MINORIES, E.1
Telephone: ROYAL 8111.

THE SURE SHIELD SERIES BRAND

IODISED THROAT TABLETS



8½d. Tins
5/6 per doz. 63/- per gross

1s. 3d. Tins
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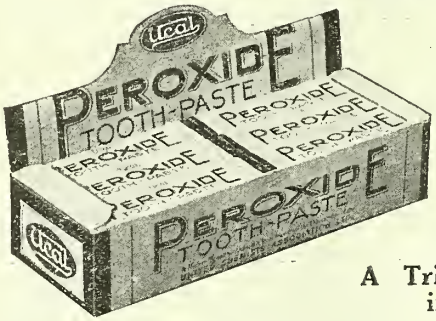
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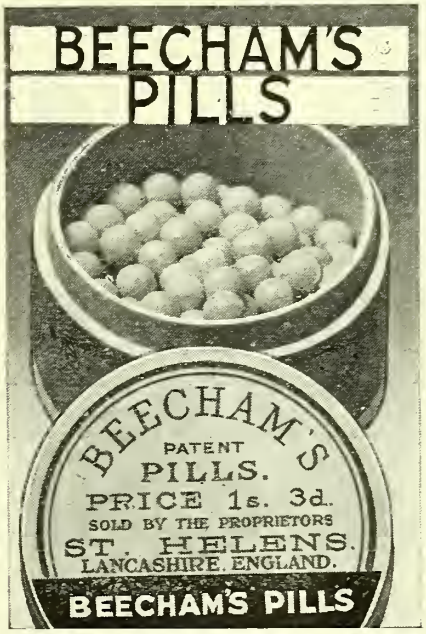
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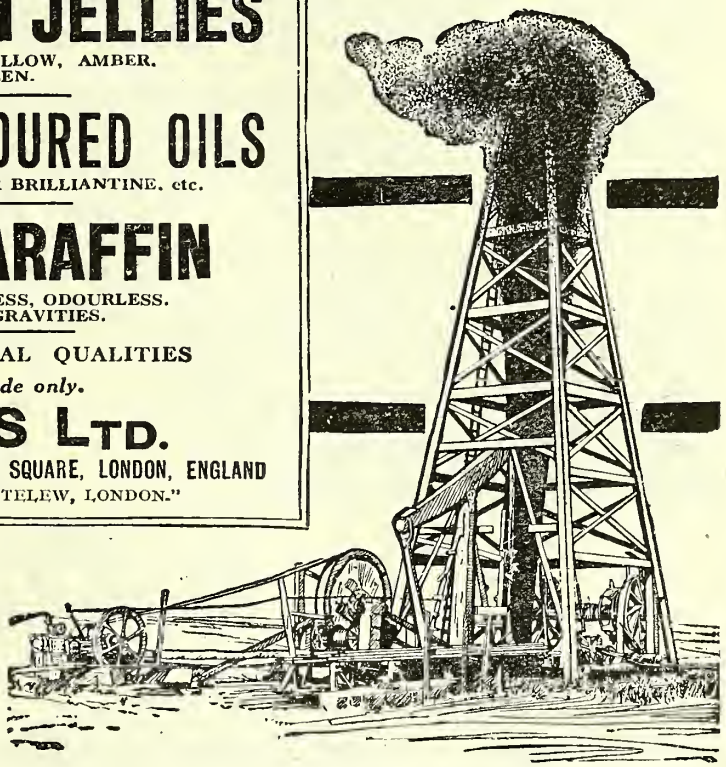
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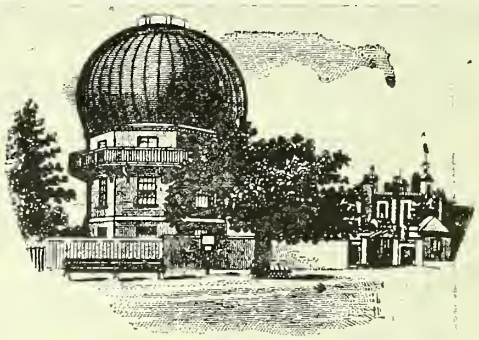
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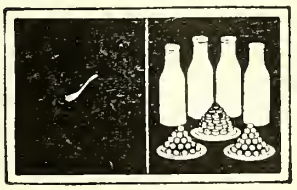
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NORWEGIAN COD LIVER OIL



WAIDES of LEEDS

It is a recognised fact in the advertising and printing world, that originality is the very essence of good advertising.

To merely "copy" a design, or a wording, is no accomplishment and does not come under any trade or professional category. It is, in fact, a useless expenditure of time and money, as a thing or an advertisement is only original *once*, and after that its interest is lost and all originality is thus gone.

We try in all our specialised lines and our own advertising to be at least original.

Often we find the "copy cat" has intervened, but that is not our loss, as if it is thought that our ideas and our designs are worthy of copying, then we have the satisfaction, at least, of knowing that interest has been obtained in the original.

If you are looking for something, no matter how small or how large, that you wish to be really original and away from anything that has yet been produced, send your enquiry along to us and we will do our best to give you what you want. If we don't succeed the first time we will submit further suggestions until we have proved that we are not "copy cats," but

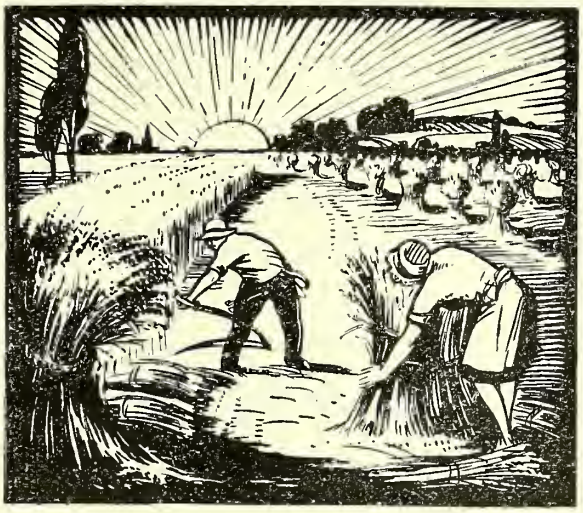
Printers with Original Ideas

▼

Thomas Waide & Sons Limited Kirkstall Road — Leeds —

Send YOUR Enquiries to Waides, Printers — Leeds —

KOTEX SAYS



Sow well and reap a good harvest

THE farmer knows all about it. He can count on the co-operation of sun and rain. The soil is there for him to work. By careful tilling he can grow as good grain in his two-acre field as his big neighbour with a dozen acres. Much depends on the manner of his sowing and the methods he adopts.

We are also engaged in sowing and reaping. Time and money spent in study and experiment before KOTEX was evolved in its present form—is so much SOWING.

Then, the task of bringing it widely to the attention of the women public—is so much SOWING.

THE CONDITIONS ARE RIGHT FOR YOU.

Now is the time to look to the harvest. Inborn in most people is the desire to have the best that money can buy. KOTEX offers the best of its kind. Every month 7,000,000 women buy it. These figures are considerable and the demand is ever growing.

A LITTLE SOWING EFFORT IS REQUIRED.

Not much—for a good bit has already been done. Most women in your neighbourhood have seen our advertising. They would like to buy KOTEX, but they will not get it until they see it in your shop.

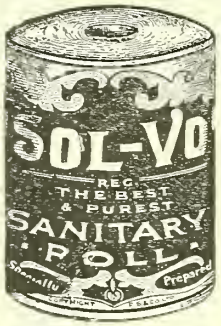
SO WHY NOT REAP YOUR SHARE?

Our free-of-charge metal counter stand is what you need. Fill it with wrapped packages and place it where it can be seen. Women folk prefer to help themselves and pay.

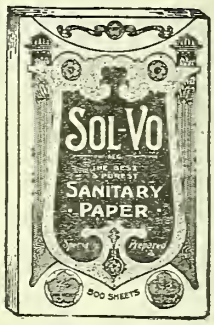
This silent service is sowing goodwill, and your business will reap the benefit. Women's appreciation of this practical courtesy makes them your permanent customers.

The great thing is to let women know that you stock KOTEX, so that they need not ask. Selling talk is unnecessary.

KOTEX LIMITED
78 Salusbury Road
London, N.W.6



SOL-VO
REG.
THE BEST & PUREST
SANITARY PAPER



Three dozen Rolls ...	per doz.	7/- net.		Three dozen Packets ...	per doz.	10/- net.	
Half gross „ ...	„	6/6	„	Half gross „ ...	„	9/6	„
One gross „ ...	„	6/-	„	One gross „ ...	„	9/-	„
Five gross „ ...	„	5/3	„	Five gross „ ...	„	8/3	„

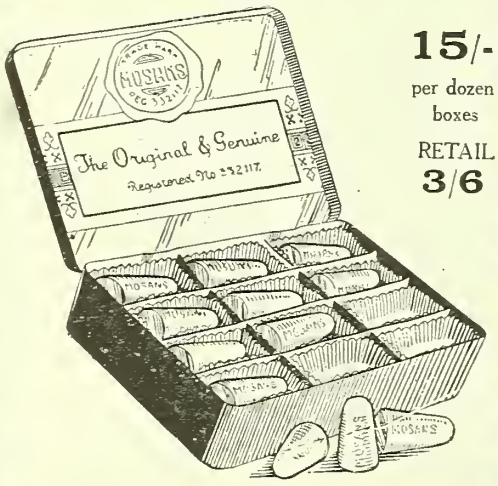
The M. G. TOILET ROLL
SUPERIOR QUALITY.

Three dozen Rolls ...	per doz.	4/9 net.		One gross Rolls ...	per doz.	4/3 net.	
Half gross „ ...	„	4/6	„	Five gross „ ...	„	4/-	„

CARRIAGE PAID.

FORD, SHAPLAND & CO. Ltd.
LABELS & SHOWCARDS PRINTERS CARTONS & ENVELOPES.
GT. TURNSTILE, HIGH HOLBORN, LONDON, W.C.1.
TELEGRAMS: FORSHAPCO, HOLB. LONDON. TELEPHONES: HOLBORN 4695/7.

"MOSANS"
Non-Greasy, Odourless
QUININE PESSARIES



15/-
per dozen
boxes
RETAIL
3/6

ORDER THROUGH USUAL WHOLESALER.
Avoid Imitations and see the No. 332117 on each box.



SENDING YOU CUSTOM

The national advertisements for Drummers are in full swing making more and more customers. Bring them into your shop, use the powerful displays and sales helps we offer free — and have a good stock of this favourite dye.

Trade terms and a full range of advertising matter free onreceipt of post-card.



The LOCARNO

(COPYRIGHT)

BRITISH MADE

MEDICATED TOILET ROLL

SOLD ONLY BY CHEMISTS

Recommended by the Medical Profession.

It will pay you to stock this line because it is not supplied to any other trader.

The label states that it can be obtained only from Chemists

Made by a firm of Experts of long experience

SHOWCARDS SUPPLIED WITH EACH ORDER

COSTS 3d

SELLS AT 6d

Free delivery on 6 doz. and upwards.

Each Roll contains 650 pieces of the Finest White Pure Sulphite Paper.

PACKED IN CARTONS FREE

Send for a FREE SAMPLE ROLL.

J. Rutherford & Co., Ltd.

Victoria Paper Mills
Victoria Road, Holloway

London, N.7

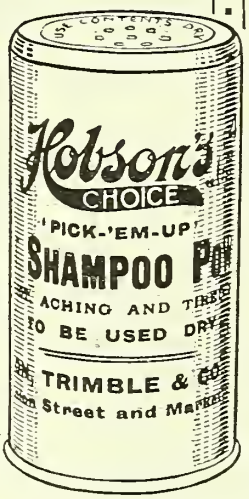
CUTTING IS FATALLY DANGEROUS
TRY
Hobson's Choice
FEET PLAISTER
IMPROVED
SURE, SAFE, AND HARMLESS.
4½d. Per Packet, with 11 ins. Strapping Plaister, and full directions for use.
HOBSON, TRIMBLE & Co., Ltd.,
9 & 11, Union St., & Market, LEEDS.

Two well Advertised Lines

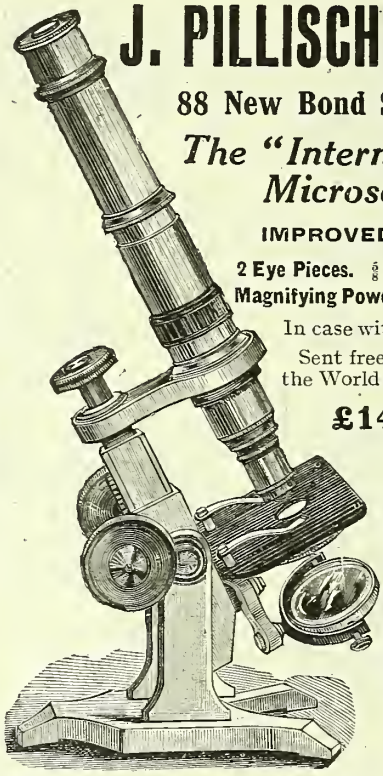
in

Hobson's Choice
FEET PLAISTERS POWDERS

THE IMPROVED PLAISTER 4½D.
In Pink Envelopes
THE DRY SHAMPOO POWDER 4D.
In Dredger Boxes
HOBSON, TRIMBLE & Co., Ltd.
LEEDS



J. PILLISCHER, Ltd.
88 New Bond St., W.1
The "International" Microscope
IMPROVED MODEL
2 Eye Pieces. ⅝ & 1/7 Object Glass
Magnifying Power 50 to 420 diams.
In case with lock and key.
Sent free to any part of the World on remittance of
£14 : 6 : 0



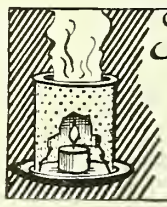
The Lancet says:
"We can conscientiously recommend it to all who really want a useful instrument."

Enquiries invited for all other kinds of Microscopes, Optical and other scientific instruments.

15 GOLD MEDALS
16 GRAND PRIX

PATENT MINERALIZED
WM. WARNE & CO. LTD.
29 GRESHAM STREET, E.C. 2.
India Rubber Manufacturers,
Surgical, Chemical, Domestic Articles, Syringes, Water Beds, etc.

THE "SAFEGUARD"
BRAND OF RUBBER GOODS
Are SUPPLIED to CHEMISTS & DRUGGISTS ONLY
FINEST QUALITY. HYGIENIC PACKING
Write for Samples and Prices.
BURGE, WARREN & RIDGLEY, LTD.
91/92 GREAT SAFFRON HILL, E.C.1
Phone: Holborn 0050. *Telegrams*: Pessaries, Smith, London.



Forster's "Eldon" Vapouriser FOR USE WITH NIGHT LIGHT
Retail, 1/9. Wholesale, 15/-.
Also Forster's "Fenolin Fluid" For Whooping Cough.
Write for particulars
HALL, FORSTER & CO., Ltd., Newcastle-on-Tyne.

Surgical Rubber Goods
VENUS, OWL, GODIVA & BALLOON BRANDS.
NOTICE.—Several instances of the sale of VENUS BRAND goods other than their make having been brought to the notice of Joseph Harris & Co., their Solicitors are instructed to take proceedings against anyone (Makers or Vendors) fraudulently using the name or design of VENUS or any imitation thereof in connection with Seamless Moulded Goods.
SEAMLESS MOULDED SURGICAL GOODS, PESSARIES, HOT WATER BOTTLES, URINALS FOR NIGHT OR DAY USE. Wholesale & Export Only.
JOSEPH HARRIS & CO., Rubber Works, Broadheath, Altrincham.

"Surco"

RELIABLE

ELASTIC HOSIERY
BODY BELTS
TRUSSES
SUNDRIES

WRITE FOR CATALOGUE

Surgical Hosiery Co., Ltd.
RUSSELL STREET
NOTTINGHAM

PERKEN, SON & CO., LTD.
Established 1852.
Contractors to H.M. Government.

THE "MATER" CLINICAL REGD.



ALL TYPES OF CLINICAL AND OTHER THERMOMETERS

Price List on Application.

94 HATTON GARDEN,
LONDON, E.C.1

Telephone: 0724 Holborn.
Telegrams: "Optimus, Smith, London."

WILSON

Surgical Industrial & Household GLOVES

"The temper of finest Steel"

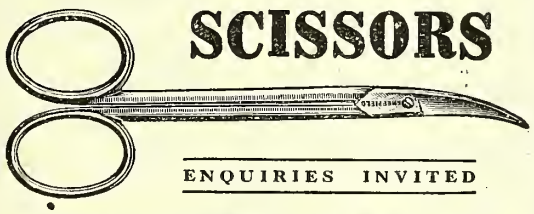
SUPPLIED TO THE TRADE EXCLUSIVELY

WILSON GLOVES

R. S. Blaker

11, CANUTE RD.
SOUTHAMPTON

SCISSORS



ENQUIRIES INVITED

GILL, HERBERT & CO., Ltd.
CUTLERY MANUFACTURERS,
Wheeldon Street, SHEFFIELD

Sells like hot cakes!



"CLEAR CORN"

—7½D.—

GUARANTEED CORN REMOVER

Hermetically sealed — no trouble with leakers

ORDER. 3 doz. and 3 bonus; Cost 13/6—Profit 10/10½
ORDER. 6 doz. and 9 bonus; Cost 27/—Profit 23/7½

CARRIAGE PAID—PACKING FREE
DISPLAY MATERIAL—SHOWCARD AND TWIN-TIER OUTER CONTAINING 12

Order Direct or through your wholesaler

KOF-OH Co., Ltd.
MANUFACTURING CHEMISTS
EVERTON - LIVERPOOL

"STERAID"

Absorbent & Medicated Dressings



Rotate the flange of the inner portion of the container in the direction of arrow until dressings appear and interior slot is visible.

MADE IN ENGLAND

The only packing in which contents are not handled or exposed to the atmosphere until required for use.

Patent Number 221761.

	Minimum Public Prices. Each 6-yd.	3-yd	1-yd.	Minimum Trade Prices. Per Doz. 6-yd.	3-yd.	1-yd.
Plain Absorbent	2/0	1/2	-/8	18/0	10/6	6/0
Sal Alembroth, Sublimate, Carbolic, Boric	2/3	1/3½	-/8½	20/3	11/6	6/4
Double Cyanide	2/6	1/5	-/9	22/6	12/9	6/9
Picric, Iodoform	3/0	1/8	-/10	27/0	15/0	7/6

		Min. Public Prices	Min. Trade Prices.
Absorbent Plain Lint, Boric ,,	2" wide	1/3 each.	11/3 dozen
Absorbent Plain Lint, Boric ,,	4" wide	1/9 ,,	15/9 ,,
Absorbent Plain Lint, Boric ,,	6" wide	2/3 ,,	20/3 ,,

There are approximately 6 yds. of Plain Lint or 4 yds. of Boric Lint in each Carton.

Obtain your supplies through your usual Wholesale House.

"CYNTA" Regd. SANITARY "TOWELINES" Regd.

COMFORTABLE, SOFT, ABSORBENT.
LONG GAUZE ENDS AND LOOPS.

NO INFERIOR FILLING.

Size	0	1	2	3	4	
PUBLIC PRICE	1/-	1/2	1/7	2/-	2/3	Per pkt.
TRADE PRICE	8/9	10/2	13/9	17/5	19/7	Per doz. pkts.

Size "Superior" (Thick pad with Bandage ends, Sterilized and specially recommended for Accouchement).

PUBLIC PRICE **3/-** per pkt. TRADE PRICE **26/-** per doz. pkts.

"CYNTA" COMPRESSED TOWELINES

Each in Carton.

Size	1		2		3	
PUBLIC PRICE	2d.	each	2½d.	each	3d.	each
TRADE PRICE	15/3	per gross	18/1	per gross	20/4	per gross

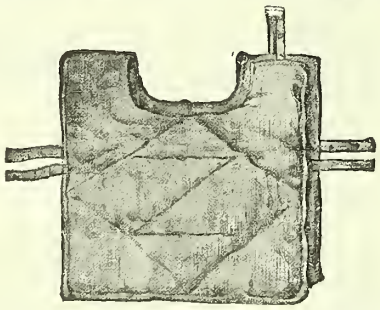
"CYNTA" COMPRESSED TOWELINES

Each in Carton with Safety Pins.

Size	1		2		3	
PUBLIC PRICE	2½d.	each	3d.	each	4d.	each
TRADE PRICE	16/-	per gross	18/10	per gross	21/1	per gross

"ZORBO"

PNEUMONIA JACKETS

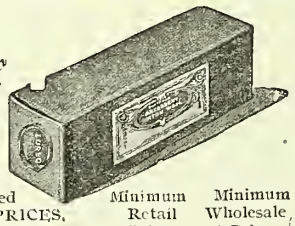


P.A.T.A. PRICES.		Min. Retail Price.	Min. Wholesale Price.
Size 1. 8×6	Infants' ..	1/– each	8/– dozen
,, 2. 10×8	Children's ..	1/6 ,,	10/9 ,,
,, 3. 12×10	,, ..	1/11 ,,	13/– ,,
,, 4. 15×12	Adults' ..	2/6 ,,	16/– ,,
,, 5. 19×13	,, ..	3/3 ,,	19/6 ,,
,, 6. 21×15	Extra Large	4/3 ,,	25/6 ,,

"ZORBO"

Superfine Sterilised Absorbent Cotton Wool

"Eminently suitable for surgical purposes."



All prices subject to alteration without notice.

Revised P.A.T.A. PRICES, JUNE 1927.		Minimum Retail Price.	Minimum Wholesale Price.	
1 lb. Packets	.. ..	4/1 each.	33/-	Dozen.
8 oz. ,,	.. ..	2/1½ ,,	17/-	,,
4 oz. ,,	.. ..	1/1 ,,	8/9	,,
2 oz. ,,	.. ..	7d. ,,	4/7½	,,
1 oz. ,,	.. ..	4d. ,,	2/7½	,,
1 lb. Cartons	.. ..	4/4½ ,,	34/10½	,,
8 oz. ,,	.. ..	2/3 ,,	17/11½	,,
4 oz. ,,	.. ..	1/2 ,,	9/4½	,,
2 oz. ,,	.. ..	8d. ,,	5/2	,,
1 oz. ,,	.. ..	4½d. ,,	3/0½	,,
IN HERMETICALLY SEALED CUTTER-LID TINS.				
1 lb. Tins	.. ..	5/1½ ,,	40/11	,,
8 oz. ,,	.. ..	2/9 ,,	21/9½	,,
4 oz. ,,	.. ..	1/6 ,,	11/11	,,
2 oz. ,,	.. ..	11½d. ,,	7/6½	,,

ROBERT BAILEY & SON LTD. Marriott Street Mills, Stockport.

HIGH-CLASS SURGICAL DRESSINGS OF GUARANTEED BRITISH MANUFACTURE.

Telegrams: "Undisputed, Stockport." *Telephones:* 2794, 4166, *Stockport.*

London Office: **Sentinel House, Southampton Row, W.C 1.** *'Phone: Museum* 8340/69.

WHOLESALE AND EXPORT ONLY.

A Sure Way to increase Sales

A small display of NORVIC Crêpe Bandages in the window or on the counter pays handsomely. Highly recommended, well advertised, and in constant demand.

P.A.T.A. Prices

	2 in.	2½ in.	3 in.	3½ in.	4 in.
Cost -	12/-	15/3	18/3	21/3	24/3
Sell -	1/6	1/11	2/3	2/8	3/-



Also Stock

NORVIC Regd.

Abdominal Crêpe BINDERS

	6 in.	8 in.	11 in.
Cost	36/6	48/6	66/6 doz.
Sell	4/6	6/-	8/3 each

Attractive Showcards free on request

NORVIC Regd. CARTON BANDAGES 70% WOOL

BLUE CRÊPE

TONIC VIC Regd

FLESH-CLOTH

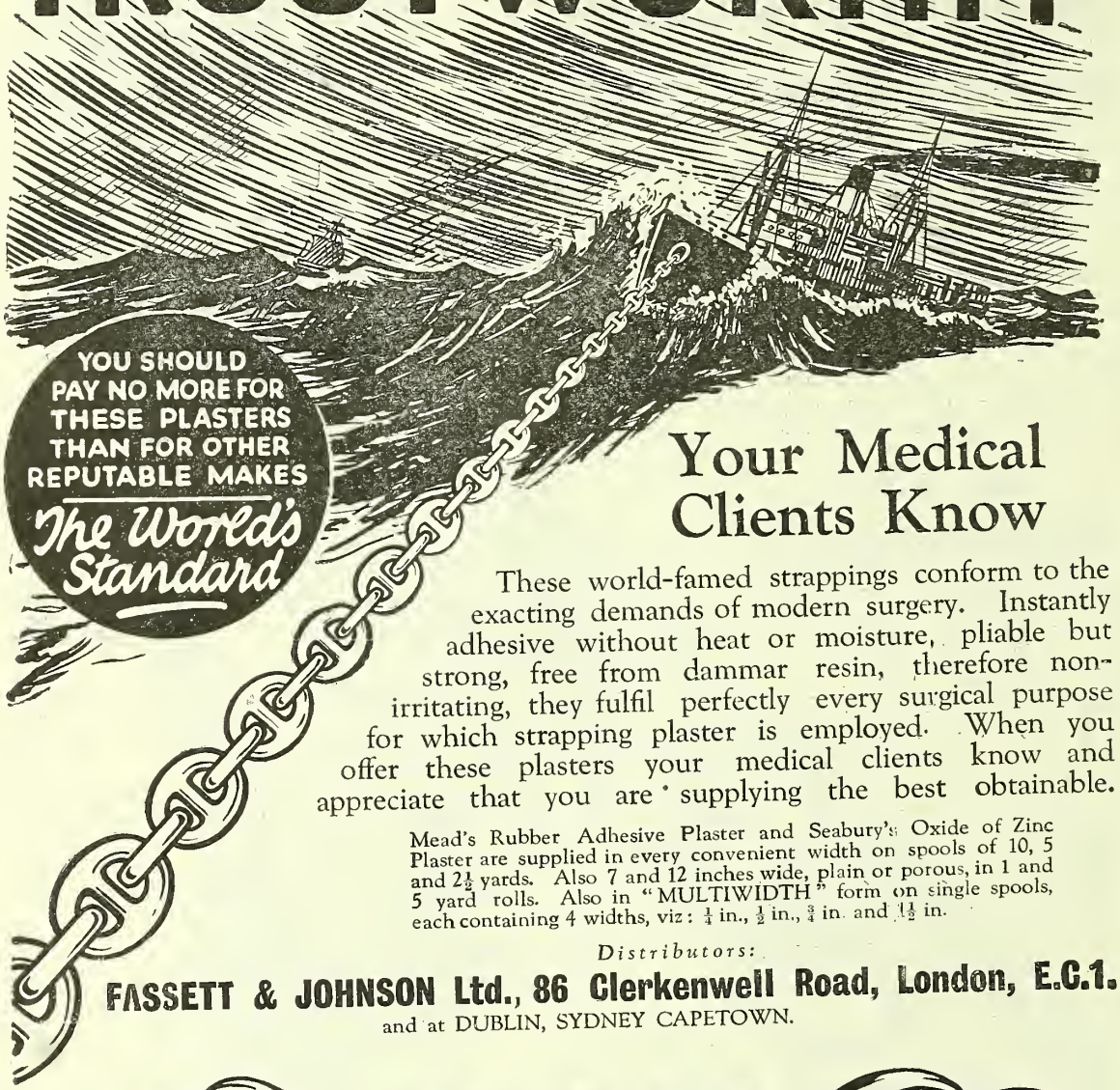
An exclusive line, unlike anything else on the market. Neatly boxed for the counter.

	Cost	Sell
Hand size	8/-	1/- each
Bath size	12/-	1/6 ,,

"NORVIC" and "VIC" specialities are stocked by all the leading wholesalers

Wholesale only from Grout & Co., Ltd.
35 Wood Street - - E.C.2

TRUSTWORTHY



YOU SHOULD PAY NO MORE FOR THESE PLASTERS THAN FOR OTHER REPUTABLE MAKES

The World's Standard

Your Medical Clients Know

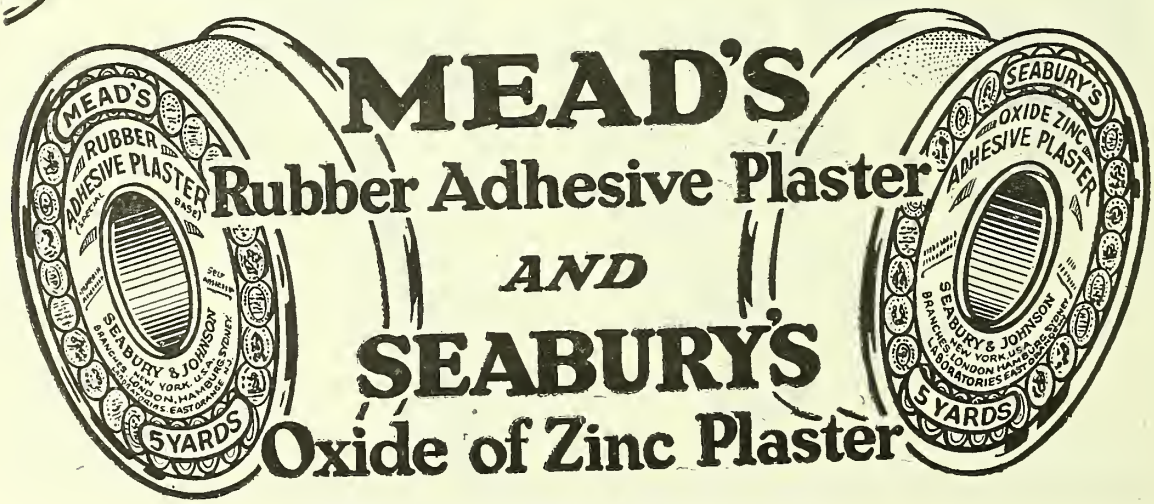
These world-famed strappings conform to the exacting demands of modern surgery. Instantly adhesive without heat or moisture, pliable but strong, free from dammar resin, therefore non-irritating, they fulfil perfectly every surgical purpose for which strapping plaster is employed. When you offer these plasters your medical clients know and appreciate that you are supplying the best obtainable.

Mead's Rubber Adhesive Plaster and Seabury's Oxide of Zinc Plaster are supplied in every convenient width on spools of 10, 5 and 2½ yards. Also 7 and 12 inches wide, plain or porous, in 1 and 5 yard rolls. Also in "MULTIWIDTH" form on single spools, each containing 4 widths, viz: ¼ in., ½ in., ¾ in. and 1½ in.

Distributors:

FASSETT & JOHNSON Ltd., 86 Clerkenwell Road, London, E.C.1.

and at DUBLIN, SYDNEY CAPETOWN.



MEAD'S
Rubber Adhesive Plaster
AND
SEABURY'S
Oxide of Zinc Plaster

Manufactured at the Seabury Pharmacal Laboratories.

DRAYTON MILL

GOLD MEDAL

TOILET PAPERS



WE manufacture all the better qualities and we shall be glad to receive your enquiries for

ROLLS, CARTONS and PACKETS

For quantities we will supply customers' special "OWN NAME" Bands.



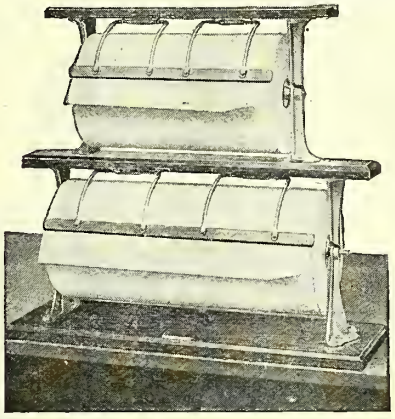


The well-known GOLD MEDAL qualities are—

"IVA" "VALEO"
"BEST MANILLA"
and "SILKO"

all manufactured at Fulham, England.





We are the Proprietors and Sole Manufacturers of

"HOPKING'S PATENT" ROLL PAPER HOLDERS

(THE ORIGINAL PATENT.)

We manufacture practically all qualities of **WRAPPING PAPER** suitable for any Trade, including those for **DRUGGISTS and CHEMISTS**, especially **STRIPED COLOURED WRAPPINGS, CHEMISTS' DEMY, etc.**

Your enquiries will have our prompt attention, please write—

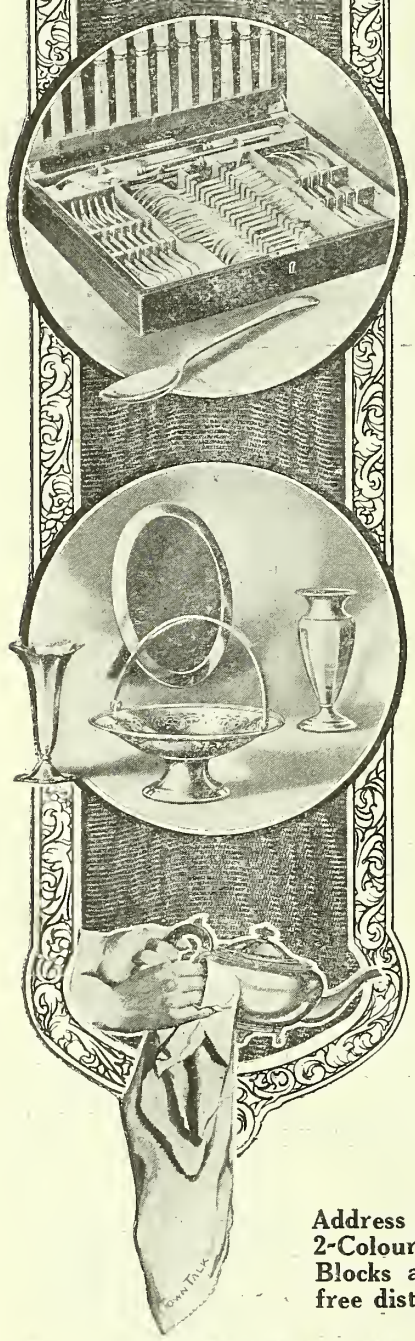
DRAYTON PAPER WORKS Ltd.

South Park, Fulham - - - London, S.W.6, England.

Also at DRAYTON PAPER MILLS, Romsey, Hampshire,
where paper has been manufactured for over 200 years.

TOWN TALK

LIQUID SILVER POLISH & SILVER PLATE CLOTH



Jewellers and Silversmiths would never think of cleaning their wares with ordinary *metal* polishes, but for over 25 years they have used "Town Talk," a fact which admits of no doubt regarding the excellence of this Polish, specially prepared for cleaning Silverware.

Metal polishes, suitable for cleaning brass, nickel and similar hard metals, are necessarily too coarse in composition for use on so soft a metal as silver, whilst the acids they contain are also injurious.

But "Town Talk" does not contain any acids, grit, ammonia or mercury. Whilst, therefore, it will not clean brass and the like, it is unrivalled for cleaning Gold, Silver and E.P. Ware, from which it removes tarnish with the merest rub, and imparts a shine of mirror-like brilliance.

Housewives therefore who are jealous of the appearance of their Silverware, and are anxious that its beauty shall not be marred by scratches or ruined by the plating being worn away, clean it—*always*—with "Town Talk."

NO WONDER THEREFORE THAT THE SALES OF "TOWN TALK" HAVE INCREASED THREE-FOLD IN THE LAST FIVE YEARS.

Do you Stock it?

If not you are neglecting one of the quickest selling and best profit-bearing lines you can handle.

"Town Talk" is advertised continuously in the leading National Newspapers, Magazines and Periodicals, and if you do not stock it, your share of the trade this advertising creates is going elsewhere.

Link up with our Sales Organisation therefore. Tell the public you sell "Town Talk" by displaying our attractive Showcards and counter literature and you will be gratified by the regularity with which you will have to order fresh stocks.

Order Direct or from—

James Woolley, Sons & Co., Ltd., Manchester; Ayrton, Saunders & Co., Ltd., Liverpool; Brooks and Warburton (American Drug Supply Co.), Ltd.

NOTE.—"Town Talk" Liquid Silver Polish is recommended for all heavily tarnished Silverware, and that embodying engraved or filigree designs. It retails at 8d., 1/4, 2/6 per bottle.

The "Town Talk" Impregnated Silver Plate Cloth is recommended for lightly tarnished Silverware, which it cleans and polishes simultaneously. It retails at 9d., 1/6.



Address enquiries for free Lantern Slides, 2-Colour Counter Leaflets, Advertisement Blocks and samples of "Town Talk" for free distribution to—

TOWN TALK Polish Company, MANCHESTER

ZEAL

CLINICAL THERMOMETERS ARE THE CHOICE OF EXPERTS

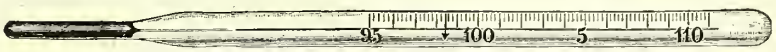


They create confidence, and are therefore eminently suited for Chemists, who can be sure of satisfying the most critical.

They have gained a solid reputation for accuracy and reliability.

They are sold with a printed guarantee.

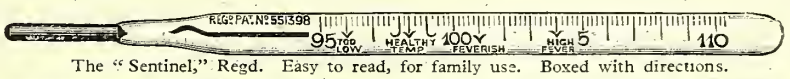
Therefore Stock Zeal's



Zeal's Non-Magnifying Pattern for Hospitals and Institutions.



Zeal's Magnifying Pattern with Index Guide. Easy to read.

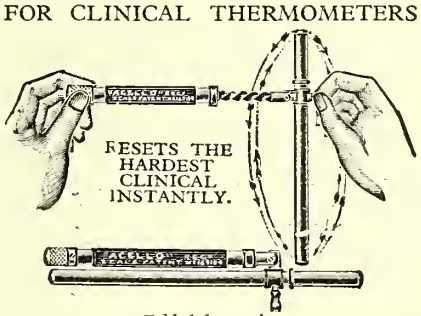


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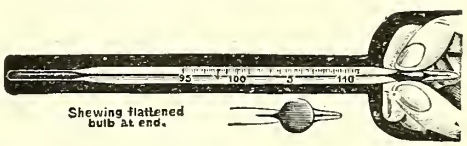
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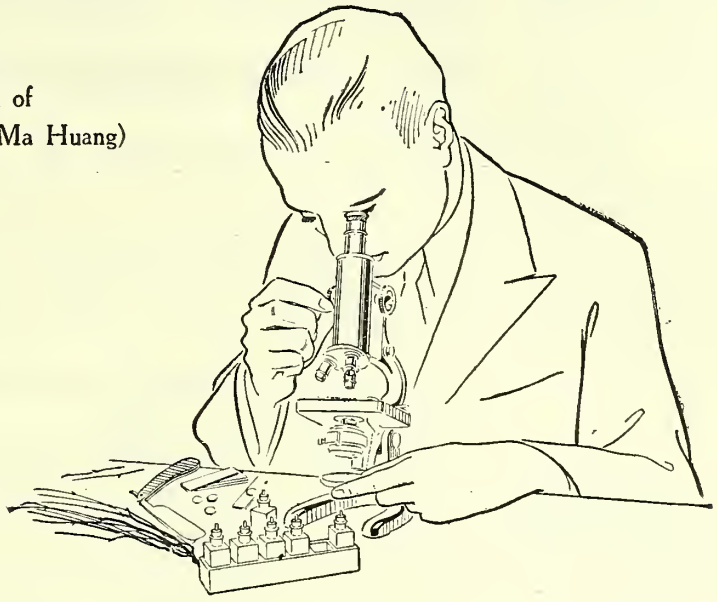
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Annual Special Issue June 28, 1930

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Summary of this Issue

A First Glance at the Articles and the Principal News of our Special Issue

Colour Plates

The colour plates of this issue are to be found as insets facing pages 798 and 809. The first consists of two miniatures from the "Tacuinum Sanitatis in Medicina," a work dating in its Latin version from the year 1276, and forms a valuable glimpse of mediæval pharmacy. The second, a reproduction of a humorous cartoon by M. Egerton entitled "Swallowing a Pill," dates from 1825 and explains itself.

Articles and Communications

The illustration on the cover, obtained from Pompeii, is described in our editorial article. (Page 793.)

Mr. Herbert Skinner surveys recent work in ointment bases, and makes valuable suggestions. (Page 795.)

Press advertisements in the seventeenth and eighteenth centuries forms the subject of an article on pages 833-841.

Original research is amply represented in an article on *Rhamnus fallax* by Professor Dr. A. Vrgoc. (Pages 782-783.)

Works of art in which Christ is represented as a pharmacist are described by Mr. Fritz Ferchl. (Pages 814-816.)

Cardiff, the meeting place of the British Pharmaceutical Conference this year, is described, with illustrations, on pages 821-826.

The history of the introduction of cinchona into medicine is set forth by Mr. E. M. Holmes. with numerous illustrations. (Pages 827-832.)

A conspectus of toilet preparations, with special references to their hygienic aspect, is contributed by Mr. R. M. Gattefossé. (Pages 784-785.)

The production, collection and merchanting of American botanicals is dealt with by Mr. S. B. Penick, jun., in an exhaustive manner on pages 846-847.

The new laboratories of Oppenheimer Son & Co., Ltd., manufacturing chemists, are described and illustrated in an article commencing on page 786.

The sale of drugs in Venice during the Middle Ages forms the subject of an article by Dr. G. Carbonelli, of Rome, written on original lines. (Page 798.)

The production of indiarubber hot-water bottles, bulbs and teats, as carried on by one of the largest manufacturers, is described on pages 842-845.

We give a comprehensive survey which shows that the London turnover in isinglass runs into larger figures than most people are aware. (Pages 848-849.)

"The Mortar and the Gaper" is the title of an account, by Professor Van der Wielen, of certain pharmaceutical signs to be seen in Holland. (Pages 809-811.)

A rhymed pamphlet dating from about 1436, entitled "The Libelle of Englyshe Polycye," has been studied for its references to contemporary drugs and their commerce. (Pages 796-797.)

Dr. Charles Singer's "Sketches in the History of English Medicine" are continued in the photogravure portion of this issue; this, the fourth instalment, deals with the seventeenth century. (Pages 799-808.)

The Week's News

The result of the election for the new North British Executive of the Pharmaceutical Society is given on page 776.

The obituary includes the name of Mr. R. C. Cowley, Ph.C., Brisbane, Queensland, a former principal of the Liverpool School of Pharmacy. (Page 790.)

English and Welsh News

The Editor will be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

Merchandise Marks Act, 1926

The Board of Trade announce that they have referred to the Standing Committee appointed by them under the Merchandise Marks Act, 1926, an application for an Order in Council to require the following imported fertilisers and feeding-stuffs to bear an indication of origin:—

(*a*) Bone meal and bone flour, whether raw, degreased or degelatinised;
(*b*) Hoof meal, horn meal and mixtures thereof;
(*c*) Meat meal, meat and bone meal and carcase meal;
(*d*) Dried blood, whether ground or unground.

Representatives of any interests substantially affected by the application who desire to be heard in opposition at the public inquiry which will be held later by the Committee are requested to communicate with the Secretary, Mr. E. W. Reardon, at the Board of Trade Offices, Great George Street, London, S.W.1, as early as possible, and in any case not later than July 21.

Dangerous Drugs Acts, 1920-25

(From "The London Gazette," June 20, 1930.)

WITHDRAWAL OF AUTHORITY
(LAWRENCE CYRIL WOOLLDRIDGE)

Whereas Lawrence Cyril Woolldridge, late manager at the Regent Pharmacy, Market Street, London, W.1, being a person duly registered under the Pharmacy Act, 1868, as amended by the Poisons and Pharmacy Act, 1908, has been convicted of offences against the Dangerous Drugs Acts:

And whereas the said Lawrence Cyril Woolldridge cannot, in my opinion, properly be allowed to be in possession of or supply raw opium, coca leaves and Indian hemp, nor to carry on the business of manufacturing, selling or distributing any of the drugs to which Part III of the Dangerous Drugs Act, 1920, applies:

Now, therefore, after consultation with the Council of the Pharmaceutical Society of Great Britain, and in pursuance of the powers conferred on me by No. 6 of the Raw Opium Regulations, 1921, as extended by the Coca Leaves and Indian Hemp Regulations, 1928, and by No. 7 of the Dangerous Drugs (Consolidation) Regulations, 1928, I hereby give notice that I withdraw, as from to-day's date, from the said Lawrence Cyril Woolldridge the authority granted by the said Regulations to persons who lawfully keep open shop for the retailing of poisons to be in possession of and supply raw opium, coca leaves and Indian hemp, to manufacture any extract or tincture of Indian hemp, any preparation, and to carry on the business of retailing, dispensing or compounding the drugs or preparations to which Part III of the Dangerous Drugs Act, 1920, applies.

J. R. CLYNES,
One of His Majesty's Principal Secretaries of State.
Whitehall, June 20, 1930.

Ideal Holidays Exhibition

The Ideal Holidays Exhibition, promoted to stimulate travel, was opened at the Royal Agricultural Hall, London, N.1, on June 20. A few stands are of interest to the drug trade. BURROUGHS WELLCOME & CO. show a series of historic first-aid cases, dating from the early days of exploration to the present time. Medicinal chests used by many explorers of note and the originals or replicas of first-aid equipment carried by famous aviators are on view. Holiday makers are appealed to by a display, including Carofax, Saxin, photographic chemicals, and Tabloid tea. RHODESIAN RAILWAYS show samples of soya beans; the RUBBER GROWERS' ASSOCIATION, LTD., display a selection of rubber products; L. TERRONI & SONS feature Italian olive oil. The exhibition remains open until July 3.

Birmingham

The continued dry weather has created a demand for insecticides and horticultural washes.

The tennis section of the Birmingham Pharmaceutical Association Social Club opened the season on June 25. Membership cards may be obtained from the secretary, Mr. G. N. W. Buckingham, 330 Victoria Road, Aston; subscription 7s. 6d.

Liverpool

"No holiday this year" is the decision of several local chemists who are suffering from depression in trade. Scarcity of money is blamed for the indifferent results obtained from many local displays of photographic requisites.

At Liverpool Assizes recently, damages of £1,250 were awarded to Mrs. Halliwell, Kinnaird Road, Wallasey, and a further £500 to her nine-year-old son, in respect of the death of Mr. John H. Halliwell, a Liverpool wholesale chemist, against Mr. Gilbert Venables, Plymouth, a naval lieutenant, whose car overturned while he was driving Mr. Halliwell. (*C. & D.*, February 15, p.180.)

Miscellaneous

POISON-LICENCE APPLICATION.—Mr. B. G. V. Young, 86A St. Albans Road, Watford, has applied to the Town Council for a licence to sell weed-killer.

VISIT TO WORKS.—On June 18 a party of members of the Portsmouth Pharmacists' Association, together with several ladies, visited the works and laboratories of the Standard Yeast Co., Ltd., Chiswick, London, W. Mr. Charles Doctor (managing director) and Mr. Lawson received the party, and tea was provided by the company in the staff recreation room. After tea Mr. Doctor conducted the party over the premises, including the special department set aside for the manufacture of the Lyco Yeast tablets. Mr. W. L. Egerton (president of the Association), in a few well-chosen remarks, thanked the firm and Mr. Doctor.

POISONING INJURED ANIMALS.—We have received a copy of correspondence that has passed between the Pharmaceutical Society and the Royal Society for the Prevention of Cruelty to Animals as to the legal position of a chemist who administers hydrocyanic acid to an animal which has been seriously injured in the street near his shop. In a letter dated June 14, the secretary of the R.S.P.C.A. writes: ". . . Of course, if the Society asked a chemist to destroy a dog which was seriously injured and in a hopeless state, in the absence of the owner, the Society would indemnify the chemist against any action which might be taken by the owner of the animal."

WHIST DRIVE AT CARDIFF.—A successful whist and bridge drive, attended by a large number of Cardiff pharmacists, their wives and friends, was held on June 19 at the residence of Mr. and Mrs. S. W. Hague, Rumney. Among those present were Mr. and Mrs. T. Badgett, Mr. and Mrs. Giles, and Mr. and Mrs. Dunn, all of Newport; Mr. and Mrs. Murray, Mr. and Mrs. Loyley, and Mr. and Mrs. Poole. Mr. Hague officiated as M.C. for whist, and Mr. Poole for bridge. The prize-winners were as follows:—Whist—ladies: (1) Mrs. Hosgood; (2) Mrs. Gardner; consolation, Miss Maisie Murray. Gentlemen: (1) Mr. Mitchell; (2) Mr. Roberts; consolation, Mrs. Saunders. Bridge: Miss Jones (playing as gentleman) and Mrs. Poole. A very pleasant evening concluded with a burlesque programme (principal actors, Miss Cora Smith, Miss Maisie Murray and Mr. Sam Thomas), consisting of two impromptu farces, "The Doctor" and "The Performing Bear."

Irish News

Brevities

MR. M. L. McCormick, R.D., has opened a business at 27 Ferryquay Street, Londonderry.

Mr. A. L. Martin, Ph.C., was awarded the first prize and Mr. J. T. H. Orr, Ph.C., the second prize, for chemists' windows in the recent Portadown shopping week.

The Bill setting up medical benefits in Northern Ireland received the Royal Assent on June 18, and will come into operation on October 1. The regulations for chemists' panels have not yet been drafted.

In the Free State Senate, on June 20, the international convention relating to "dangerous" drugs was approved. It was stated that it might be necessary to amend the Dangerous Drugs Act, 1925, in certain minor respects.

Belfast

The chemical works of J. A. Beck & Sons, Ltd., Dalton Street, Belfast, were recently damaged by fire.

The successful candidates at the Pharmaceutical Preliminary examination at Queen's University, Belfast, were Clara E. Boomer, Margaret M. Burns, T. O. R. Curran, A. G. Kerrigan, D. McKelvey, Margaret M. Maguire, J. J. Murray.

Scottish News

North British Executive

The number of voting papers issued in connection with this year's election of the North British Executive of the Pharmaceutical Society was 1,621; 458 were returned and 18 were informal, leaving 440 effective. The following is the result of the poll:—

Simpson	349	Mackenzie, D. G.	256
Harley	330	Currie	251
McVitae	330	Miller	216
McNab	327	Carmichael	211
McMillan	325		
Coull	316	*Robertson*	210
Mackenzie, T.	313	*Forrest*	205
Arthur	309	*McCall*	202
Stewart	305	*Murray*	201
Bennett	287	*Heddle*	195
Milne	283	*Weir*	181
Duff	273	*Taylor*	139
Culbert	268	*Thomas*	124

The chairman declared the first seventeen to be elected members, constituting, together with the president of the Society (Mr. A. R. Melhuish), the vice-president (Mr. F. G. Hines), and Messrs. Thomas Guthrie and James Jack, as *ex-officio* members, the Executive for the year 1930-31.

Brevities

Mr. Thomas Harley, Perth, has offered to provide a trophy for competition by the Perthshire Amateur Football Association.

Mr. Charles Young, chemist and druggist, and Sir Harry Lauder appear together in a photograph recently published in the Dundee "Courier."

Mr. John Jolley, Auchtertool, near Kirkcaldy, has been appointed sales manager for Scotland for the Tor Perfumery Co., Ltd., Toro Soap Works, Castle Bromwich, Birmingham.

There is a growing feeling amongst Scottish chemists that present charges for dispensing should be increased. Comparing the strictly professional side of pharmacy with other professions the charges are ridiculously low, and it is quite evident that some who are in business could with advantage take a course in costing methods.

Sporting Events

THE Manchester and District Pharmacists' Golfing Society held their sixth meeting of the season at Sandiway golf course on June 18. This was the eighth occasion on which they have met their *confrères* from Liverpool and Merseyside in competition for the Gibbs challenge trophy. It rained heavily for a time, but cleared up later. After tea the Manchester captain (Mr. E. Fox), in a few well-chosen remarks, referred to the loss they had sustained by the death of Mr. Gerard Gibbs, a true gentleman whom they all respected. On behalf of the Liverpool and Manchester chemist golfers he expressed their thanks to D. & W. Gibbs, Ltd., for their generosity in providing the trophy for competition and also for handsome replicas for the winning eight. He then called upon Mr. Taylor (Manchester representative of D. & W. Gibbs, Ltd.) to present the trophy to the Liverpool captain (Mr. Cole) and also the replicas to the winning eight. Mr. Fox, in thanking Mr. Taylor, said they appreciated the interest taken in the societies. The following were the scores:—



Photo] [*Cleworth*

LIVERPOOL TEAM WITH THE GIBBS' TROPHY

Liverpool		*Manchester*	
Derrick	73	Aves	72
Cole	74	Stuart	78
Alder	76	Stout	79
Jewell	79	Owens	82
Jones	80	Gardner	87
Scholes	83	Sturdy	89
Glover	84	Sturdy	89
Ashworth	87	Dutton	92
	636		668

A special prize of golf balls for the best net score returned by a player not playing in the competition was won by Mr. Grant, of Birkenhead. The sweepstake money for the best net score in the competition was won by Mr. J. Aves.

THE staff of Burroughs Wellcome & Co. and their friends assembled in the grounds of the Wellcome Club and Institute, Dartford, on June 14, for the annual garden party and sports day. The efforts of an enthusiastic committee were supported admirably by the Clerk of the Weather. The general manager (Mr. George E. Pearson) and the works manager (Dr. H. A. D. Jowett) were successful in making the day a complete relaxation from routine. There were at least twenty events. Tea was served in the orchard, and a concert and whist drive followed. Dancing to the music of the Dartford Town Silver Band took place during the evening, and shortly after 10 o'clock there was a display of fireworks. Mrs. Jowett distributed the prizes.

Imperial & Foreign News

IMITATING "HIMALAYA BOUQUET" PERFUME.—For importing imitation perfume from Japan and selling it in Singapore, a representative of a Singapore firm was recently fined 500 (Straits) dollars and 380 (Straits) dollars costs. The case concerned the well-known "Himalaya Bouquet" perfume, manufactured by Erasmic, Ltd., and represented in Singapore by Sime, Darby & Co., Ltd.

OPIUM TRADE IN PERSIA.—The Persian Government a short time ago planned to replace the opium monopoly by a tax on land planted with opium. It appears that this plan has had to be given up. Exportation of opium at the beginning of last season was exceptionally active on account of the favourable prices in Europe, but the declining prices of opium in the world's markets last autumn consequent on the cheap offers of Turkish resulted in an accumulation of stocks of Persian. With the present prices ruling, and the increased export duties, the export trade is so handicapped as to be extinguished, and a still further decrease of opium exports is to be anticipated.

ADVERTISING BALSAM OF PERU ON A POSTAGE STAMP.—The 20-centavo stamp of San Salvador bears an inscription to the effect that balsam of Peru is only produced in that small Central American State ("solo el Salvador produce el balsamo del Peru"). M. Bouvet, the new secretary of the Paris Society of Pharmacy, who read a paper on this remedy at a recent meeting, stated that balsam of Peru was geographically a misnomer. It was so called because it was shipped to Spain in the galleons from Lima. M. Bouvet added that it formed part of a tribute paid by the Indian chiefs of Cuscatlan, by whom it was offered in curiously adorned earthen jars.



INDIAN DRUG TRADE IN 1929.—The imports of drugs and medicines into India during 1929 showed an increase and were valued at Rs.217 lakhs, against Rs.203 lakhs in the previous year. The imports of quinine salts declined from 134,900 lb. to 118,000 lb., but the value rose from Rs.23 lakhs to Rs.26 lakhs. Proprietary and patent medicines also increased in value from Rs.40 lakhs to Rs.47 lakhs. The imports of camphor rose from 1,600,000 lb. to 1,700,000 lb., Japan being the principal supplier. Imports of other preparations were as follows:—

		1928.		1929.
Cocaine ...	(oz.)	1,126	...	980
Cod-liver oil ...	(lb.)	82,842	...	90,418
Morphine ...	(oz.)	1,816	...	1,063
Saccharin ...	(lb.)	26,000	...	34,000
Other sorts, value		Rs.104 lakhs	...	Rs.106 lakhs

CANADIAN CHEMICAL OUTPUT FOR 1929.—Chemical production during 1929 showed a gain of 14 per cent. over the total for the preceding year, according to preliminary figures issued by the Dominion Bureau of Statistics at Ottawa. At $168,598,892 the output of chemicals and allied products made in Canada reached a higher valuation than in any previous year except 1917 and 1918 when the production of munitions carried the output value to an abnormally high value. The advance in value in 1929 over 1928 was $21,623,055. Imports of chemical products were valued at $40,131,178 against $36,963,694 in the preceding year, and exports rose to $21,827,696 as compared with $18,356,645 in 1928. Canada's consumption of chemicals and allied products during 1929, computed as the sum of the production and imports values less the value of chemicals exported, was $186,902,374, or $21,300,000 above the total of $165,582,886 for the preceding year.

French News

From the "C. & D." Paris Correspondent.

BAN ON PROPRIETARIES.—Many pharmacists are extremely desirous of obtaining the introduction of some clause forbidding doctors to prescribe patent medicines to future panel patients. To secure this the support of the medical profession would be necessary, and the difficulty seems to be to discover some serious advantage which the pharmacists could offer to the medical associations in return for their support in this ban on proprietaries.

THE French national health insurance act, in its new and revised form, is still travelling backwards and forwards between the Chamber and the Senate. The pharmacists' representatives, Senators Savignol and Mounié appear to have realised the desiderata of the profession. Not only did they secure their colleagues' approval of three essential points: (1) Free choice of pharmacist by the patient; (2) a uniform tariff; (3) listing of proprietaries by a committee on which pharmacy will be duly represented; but they induced the Senate to endorse the idea of forbidding the new health committees to open pharmacies of their own.

INSURANCE CLAIM CASE.—A rather curious case came before a Paris justice recently. An insurance company had refused to pay a pharmacist's bill for medicaments, bandages, etc., supplied to the victim of an accident. The supply of the medicaments and the accuracy of the dispensing and compounding was not disputed. The company's plaint was that the bill worked out at 24.13 fr. per diem for the 333 days during which the treatment lasted, and it was claimed that 19 fr. would be ample. The court took the common sense view that the pharmacist had no alternative and his business was simply to supply what the doctor prescribed, which he had evidently done. As to the contention that the antiseptic dressings might have been supplied in smaller quantities, it was pointed out that these goods are put up in sealed packets, only to be opened when actually used.

CENTENARY OF NICOT.—This year brings us the fourth centenary of the birth of Jean Nicot, whose name is immortalised in the Latin title of the tobacco plant. Unfortunately for those numerous smokers of the weed who would certainly wish to celebrate the day, the exact date of his birth appears to be unknown. A native of Nîmes, he was French Ambassador at the Court of Portugal in 1560, and sent seeds of the "petun" (as the French first termed it) to Queen Catherine de Medici. The new plant was supposed to have many medicinal virtues, and a French missionary in Brazil attested that it "distilled and consumed the superfluous humours of the brain," and Catherine is said to have utilised it in the form of snuff for the headaches to which she was subject; hence another of its ancient French names "l'herbe de la reine."

THE coming centenary of the "Trois glorieuses," the July days during which the French Revolution of 1830 took place, recalls a little tragedy of which a Parisian perfumer was the victim. Bully had at that time premises in the rue St. Honoré, near the Louvre and the Palais Royal. His toilet vinegar, which still exists, was at that time the fashion, and he had a thriving business and was on the road to prosperity when the three days' street-fighting began. Some of the unfortunate Swiss Guards of the royal palace, pursued by the mob, took refuge in his shop, but the infuriated populace followed, and destroyed everything on the premises. Bully was ruined. He had to sell everything he possessed, even the recipe of the famous vinegar, but yet he still remained hopelessly in debt. Honest and indomitable, he moved to a garret, lived on bread and milk, and, out of the ninety francs a month he earned as porter in a newspaper office, set aside seventy for his creditors. This he did for fifteen years, but at last, worn out with privation, he fell ill, and died in hospital.

New Zealand Notes

THE New Zealand Pharmaceutical Register for 1930 contains the names of 732 chemists.

DR. J. S. MACLAURIN, Dominion analyst and chief inspector of explosives, has retired. He will, however, still be associated with the activities of the Dominion laboratory, since he has been invited to continue his investigations in the chemistry of the flax industry.

NITROGEN FROM AIR.—An American engineer is making investigations in and conducting a survey of the district between Doubtful Sound and the west arm of Lake Manapouri, with a view to the extraction of nitrogen from the air. If his report is deemed sufficiently favourable a company will probably negotiate with the New Zealand syndicate which was granted a concession over the area In the event of these negotiations resulting in the purchase of the option a new industry, involving an expenditure of approximately £7,000,000, will be established at the Sound. The nitrate works could employ up to 2,000 men.

CO-OPERATIVE ADVERTISING.—The "Sun," Auckland, is conducting on behalf of the Auckland chemists, a scheme of co-operative advertising. Each Saturday, a particular message to the public is featured, and throughout, the slogans "Ask your Chemist," and "Patronise your local Chemist," are prominently displayed and cleverly worked in through the text. This is the first series of its kind to be conducted in New Zealand, and through it chemists hope to regain much of their lost trade. Several link up with the advertisements by displaying them with the appropriate goods in their windows.

Pharmaceutical Conference

The annual conference of the Pharmaceutical Society of New Zealand was held at Mount Cook recently, Mr. H. A. Papprill (president of the Canterbury division) in the chair. The chairman of the Pharmacy Board, Mr. R. R. Parnham, reported that a successful campaign had been conducted against drug stores not under the control and supervision of a registered chemist. The Pharmacy Bill had taken up much of the Board's time, but a fair amount of success had been obtained. The Minister of Health and the Health Department had taken a sympathetic interest. Price cutting by departmental and cut-rate stores was also referred to, but the chairman did not think chemists, provided they kept up the quality of their goods and maintained their status, had much to fear.

One remit suggested a conference with the British Medical Association of New Zealand concerning the prescribing of expensive proprietary remedies and the effect of such prescribing on the public, with a view to:—(1) Adapting the Australian Formulary; (2) the B.M.A. of N.Z. issuing its own formulary; or (3) a formulary being issued by a committee of the B.M.A. and the Pharmaceutical Society. The report of the special committee set up to bring definite proposals for the chemists of New Zealand to manufacture their own preparations to replace imported ones was adopted.

Other remits agreed to included:—"That it be a recommendation to chemists to eliminate the word 'Pharmacy,' using instead 'Pharmaceutical Chemist.' . . ." "That as the maintenance of public health concerns the pharmaceutical profession, registered pharmacists should be included on the Board of Health." "That the Health Department be asked to employ a registered pharmaceutical chemist in an advisory capacity; also to appoint one to the Board of Health." "That the attention of the Minister for Public Health be again drawn to the loose methods adopted by packers of drugs for use by the public, with a strong recommendation that all packing houses be under the direct supervision of a pharmaceutical chemist." "That a protest be made to the Labour Department against classing the chemist's dispensary as a factory in terms of the Factories Act."

Optical Equipment

CHEMISTS about to take up optics should remember the old maxim, "The best is the cheapest in the end," and not purchase stunt equipment. Here is an example worth remembering: A few years ago xylonite-mounted trial lenses were highly popular until the test of time began to tell. The usual colours were black and white. After daily exposure to sunlight the black-rimmed ones assumed a brownish tint; the white, an old ivory. They expanded, became brittle, the lenses revolved, and the mountings often snapped when they were being cleaned.

All the wholesale houses supply that handsome piece of furniture, the cabinet trial case. One of these is well worth the extra outlay, both for its utility and the impression it creates—it enhances the prestige of the practitioner, besides giving the patient a feeling of confidence.

The most popular test charts are the Union and the Orthops. Both being constructed on the same principle, the pull the former has over the latter is that it folds up when not in use, and therefore has a longer life than its rival.

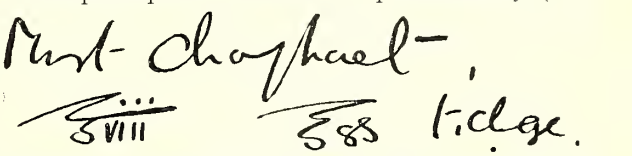
Of trial frames there are many types, both stand models and for the patients' direct wear. Everyone has his own particular favourite. In general the chief things required are an adjustable P.D. and a nose-rest easily altered as to height and projection.

Next to the trial case perhaps the most important instrument is the retinoscope. Of these there are scores of different types, ranging from a mirror and handle to the elaborate Copeland or Turville-Stewart instruments. Each has its own particular merit and each its following. The model I personally favour is the Liebreich, which is handy for retinoscopy, and, with the condenser supplied, excellent for indirect ophthalmoscopy, not to mention focal illumination. There are two principal types of ophthalmoscope—the May and the tried favourite, the Morton. Of course, the luminous kind of instrument is now preferred, and it certainly deserves its popularity owing to its great utility, especially when visiting patients, or for the country practitioner whose premises have no electric light. There are still, however, many experienced practitioners, and not a few of the moderns, who prefer the older non-luminous instruments. Of the former of these there are two main types: in the one the battery is contained in the handle, the other is connected to the main electric supply. With the latter the initial outlay is practically the last, but the former is the more handy.

Prescription Problem

The Editor will be glad of the loan of original prescriptions suitable for this column, together with the solution of each difficulty.

OUR next problem is given below. Exact transcriptions of the prescription are invited on postcards only (one



attempt), which should reach the Editor, THE CHEMIST AND DRUGGIST, 28 Essex Street, London, W.C.2, not later than the first post on Monday, July 7. Prizes will be awarded at the discretion of the Editor.

ANOTHER KIND OF CHEMIST.—"I see you describe yourself as a chemist? Are you a member of the Pharmaceutical Society?" asked Mr. Campion of a defendant at the Tower Bridge Court. Accused: "No; I'm a crane driver at an Epsom salts works."—"The Daily Herald."

New Companies

and Company News

P.C. means Private Company and R.O. Registered Office.

JOBSONS, LTD. (P.C.).—Capital £5,000. Objects: To carry on the business of manufacturing chemists, druggists, drysalters, etc. The subscribers are: W. K. Petrie and J. Carmichael. Solicitors: Rutherford & Donwauchope, Edinburgh.

SAVORY & MOORE, LTD., was registered as a " public " company on June 16, with a nominal capital of £1,000 in £1 shares. Objects: To acquire the business hitherto carried on by Savory & Moore (1928), Ltd., and to carry on the business of chemical manufacturers and dealers, chemists, druggists, drysalters, etc. The subscribers are: H. A. Norton and A. E. Patterson, and five others. R.O.: 61 Welbeck Street, W.1.

P. D. S. (LEEDS), LTD. (P.C.).—Capital £2,500. Objects: To carry on the business of wholesale and retail chemists, and manufacturers of and dealers in all commodities usually dealt with or sold by chemists and druggists. The directors are: F. C. Stock, 54 Otley Road, Headingley, Leeds, chemist, and H. Parsons, 141 Street Lane, Roundhay, Leeds, chemist. Solicitors: Arthur Willey Hargrave & Co., Victoria Square, Leeds.

A. & M. ZIMMERMANN, LTD.—As liquidator of this firm Mr. G. Hay confirms the fact that Petri Brothers, Ltd., will, as from July 1 next, acquire and carry on the business heretofore carried on by A. & M. Zimmermann, Ltd.

TAYLORS (CASH CHEMISTS) TRUST.—The net revenue for the year to March 31, 1930, amounted to £78,344, a decrease of £36,081 compared with the preceding year. The fall in net revenue is, state the directors, mainly accounted for by profits on sales of investments realising some £30,000 less than last year. The dividend income shows a small reduction of £2,000. The dividend on the deferred ordinary shares is 20 per cent., against 33⅓ per cent., and the reserve is brought up to £30,000 by the allocation of £10,000.

PHOSFERINE (ASHTON & PARSONS), LTD.—The report states that the net profit for the year ended April 30 was £52,045, compared with £84,904 for the previous period of sixteen months (which is at the rate of £63,678 per annum). The directors recommend a dividend of 8 per cent. on the deferred shares (unchanged), again giving the 8 per cent. participating ordinary shares an additional 1 per cent. Preliminary expenses are to be reduced by £5,000 (against £12,000), and £3,000 (against £5,000) is to be added to reserve, leaving £9,713 to be carried forward (compared with £9,668).

VITAMINS (1928), LTD.—The directors are able to report a profit for the year to March 31, 1930, of £13,930, against a loss of £10,229 for the initial period of operations. The company was formed in March 1928 to acquire the process and manufacturing rights of " Bemax " and other cereal products. After deducting the loss brought forward there is a credit balance of £3,701 available towards meeting arrears of interest on the income debenture stock. This will enable interest to be paid for the period to March 31, 1929. The report states that sales for the year represent an increase of about 33 per cent. over those for the fifteen months preceding. The company is continuing to develop its overseas markets. It is anticipated that the factory at Hammersmith will be ready for operations next month

EUGENE RIMMEL, LTD.—The profit for 1930 was £3,875. Directors fees, tax and provision for depreciation absorbs £1,892, and debenture interest and costs of acquiring Breidenbach & Co. absorbs £651. Balance was £3,339. Dividend on preference shares for half-years ended December 31, 1927, and June 30, 1928, absorbs £3,030; forward £1,641. Since date of accounts a further half-year's dividend on preference shares to December 31, 1928, has been paid. Directors have purchased 16,002 shares of £1 each of a total issued capital of 16,032 shares of Breidenbach & Co. at a cost of £10,002. Funds necessary to purchase were mainly provided for by the creation of 90 debentures of £100 each. Costs of purchase (£111) and interest on debentures (£540) have been written off, but no benefit from investment has as yet accrued to the company. Consolidation of interests of the two companies with consequent saving of overhead charges will be achieved during current year, and future accounts should reveal benefits which directors believe will result. The position of the Société Anonyme Eugène Rimmel of which the company holds all share capital, continues to be satisfactory. In order to meet increasing demand for the company's products in the United States the directors have formed an American company under title of Rimmel, Inc., of which the company holds all share capital.

Gazette

Bankruptcy Acts

RECEIVING ORDER AND ADJUDICATION

STOTT, M., 6 Hyde Park, Halifax, manufacturing chemist.

Business Changes

MR. DAVID R. SHARP, chemist and druggist, has commenced business at 94 South Street, Perth.

PETRI BROTHERS, LTD., chemical merchants, have removed to 3 Lloyd's Avenue, London, E.C.3.

THOMAS TOMLINSON & SON, chemists' valuers, Manchester, have opened a branch at 44 Fargate Street, Sheffield.

The telephone number of the Pharmaceutical Lanoline Co., 7 Carnwath Road, Fulham, S.W.6, has been changed to Fulham 1194.

Coming Events

This section is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Wednesday, July 2

Liverpool Chemists' Association and Branch. Annual picnic at Llandudno. A special train will leave as follows:—Liverpool (Lime Street), 1.25 p.m.; Edge Hill, 1.30 p.m.; Mossley Hill, 1.40 p.m.; Llandudno (arrive), 3.40 p.m. The cost of the outing, including lunch and dinner on the train, will be 11s. per head.

Thursday, July 3

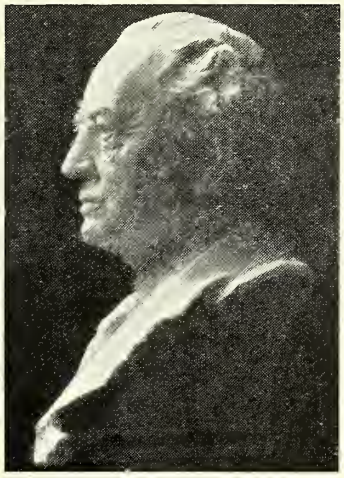
Pharmaceutical Society of Great Britain, East Metropolitan Branch. Summer outing to Brentwood and neighbourhood. Motor coaches leave Walthamstow, Church Hill, at 1.45 p.m., and Stratford Broadway at 2 p.m. Tickets, including drive and tea, 4s. 6d. each. Children under fourteen, 2s. 6d. each.

Pharmaceutical Society of Great Britain, West Metropolitan Branch. Outing to Taplow. Motor coaches leave Lancaster Gate tube station at 3.15 p.m. Tea at the Dumbbell Hotel, Taplow, at 5 p.m. The outing is free to all members of the branch. Friends are welcome, the charge being 5s. inclusive. Tickets from Mr. Gwilym Thomas, 105a Crawford Street, W.1, before June 30.

Pharmacy Pots in Welsh National Museum

The Alec S. Johnson Collection

WE make, on page 824 of this issue, a brief allusion to the Alec S. Johnson collection of pharmacy pots and mortars, which, quite appropriately, have an entire case allotted to them in the National Museum of Wales. We have pleasure in reproducing below a photograph of this remarkable collection formed by the late Mr. Robert Drane, whose bust (also to be seen in the National Museum of Wales) we show as a second illustration. An outline of Mr. Drane's career appears in the same section of this Special Issue as the reference to the collection. It has been said that the world knows nothing of its greatest men; on this principle we think it appropriate to add a few lines on Mr. Drane's robust mental equipment and his wholesome derision of everything in the nature of fraud or quackery. We may recall that during his year of office as president of the Cardiff Pharmacists' Association (1901-02) Mr. Drane delivered a striking address before a representative audience of his fellow members on "The Present Condition of Pharmacy." On turning to our report of the meeting, we notice that we printed in full a delightful skit, evidently from Mr. Drane's own pen, on some of the grotesque claims put forward for proprietary medicines of transatlantic origin. When Mr. Drane's collections were dispersed, the most valuable of the pharmacy pots and certain other items were purchased by Mr. Alec S. Johnson, the chairman and managing director of Robert Drane, Ltd., who has placed them in the National Museum of Wales on exhibition.



ROBERT DRANE, F.L.S.
(1832-1914)

The pharmacy pots include examples of Italian and Spanish majolica and of English delft ware. The Italian syrup jar (Syr. Violato), dated 1584, is a particularly good example of finely potted majolica. The well-known Spanish albarelli are represented by a specimen dated 1541.

The majority of the bronze mortars are English and Dutch pieces of the seventeenth century. Of peculiar interest among the wooden mortars are an English country-made example in ash, and a large ivory pestle and mortar of the sixteenth century. The mortar measures $4\frac{1}{8}$ inches in diameter by 5 inches in height, and weighs 34 ounces; the pestle weighs 12 ounces. The ivory specimen is probably unique. The list of the exhibits which follows has been specially prepared for this article.

Top row (left to right).—Inhaler, Wedgwood cream ware; English, late eighteenth century. Small drug pot and cover, majolica ware; Italian, seventeenth century. Syrup jar of finely potted majolica; Italian, dated 1584. Ointment pot, delft ware; English, seventeenth century. Syrup jar, teapot shape delft ware; English, dated 1644.

Middle row (left to right).—Pharmacy jar, delft ware; English, eighteenth century. Pharmacy vase, majolica ware; Italian, seventeenth century. Drug pot, majolica ware; for pills; Italian, seventeenth century. Syrup jar, salt glaze stoneware; English, eighteenth century. Tobacco jar, delft ware, English, eighteenth century.

Bottom row, on base (left to right).—Inscribed bronze mortar; Dutch, dated 1606. Inscribed bronze mortar; English, dated 1658. Bronze mortar with ring handles; English, dated 1678.

Bottom row (extreme left).—Drug pot, majolica ware; Italian, dated 1643.

Bottom row (in front).—Bronze mortar, with Tudor rose in relief; English, sixteenth century. Mortar and pestle of fossil ivory, together weighing 46 oz.; English, sixteenth century. Bronze mortar; English, dated 1721.

Bottom row (extreme right).—Drug pot, albarello shape; Spanish, dated 1541.



THE ALEC. S. JOHNSON COLLECTION OF PHARMACY POTS AND MORTARS

An Alternative to Frangula

Pharmacognosy of the Peel of *Rhamnus fallax*, Boiss.

By Professor Dr. A. Vrgoč

Director of the Pharmacognostic Institute, University of Zagreb, Jugoslavia.

THE peel of *Rhamnus fallax* became a drug of commerce first in 1906 as an adulterant of frangula bark and was the topic of a short study by Mitlacher. After the war the peel was collected in large quantities in Jugoslavia and exported to Germany in truckloads under the designation "frangula." The objects of my research were to demonstrate (1) whether the peel exported to Germany was really derived from *Rhamnus fallax*, Boiss., and (2) whether its constituents and active principles were the same as those of frangula and cascara sagrada; also to determine whether cortex rhamni fallacis was indeed a substitute for frangula bark, or merely an adulterant. For this purpose a large quantity of the commercial drug of Croatian origin was obtained by me and subjected to botanical and chemical investigation. As a control I examined also peel collected by myself from trees sufficiently identified botanically. Concordant results were obtained with both samples.

Rhamnus fallax, Boiss., is a subalpine shrub, 1.5 to 3.5 metres high, which thrives in mountainous districts at an altitude of from 500 to 1,300 m., and is widely distributed in the Balkans, found here and there growing very rank. The habitat includes Jugoslavia, especially Croatia, Bosnia and Carinthia; western Bulgaria, northern Greece, and Albania.

Morphology.—The specimens of the drug taken by me from commercial samples consisted of pieces ranging from 10 to 40 cm. in length, and on an average 2-4, more rarely 4-6 mm. thick, in quills and double quills. The outer bark is glossy, reddish-brown and covered with transversely elongated leuticels, yellow or yellowish-brown. The inner bark is yellow to orange- or reddish-yellow. Thicker, that is older, peel is covered with a blackish-brown, more or less strongly developed cork. Young, especially thin peel, is very difficult to distinguish from frangula. Inner bark from peel 4-6 mm. thick forms about three quarters of the whole drug.

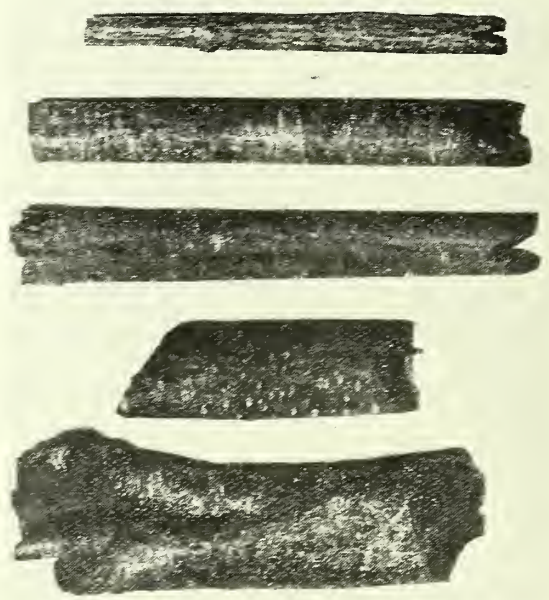
Anatomy.—The anatomy of the young peel is completely that of frangula. The periderm of a peel 4-6 mm. thick is comprised of 20-25 rows of thin-walled brown cells, which towards the middle bark become sclerenchymatons forming a ring. In the pareuchyma are mucilage canals and primary bast fibre groups. The medullary rays of the inner bark begin at the cambium with a breadth of 1 to 10 cells and a height of from 5 to 30 cells. Tangeutially cut medullary rays at the cambium are wide.

Width	54	microns	... Height	270	microns
	81	,,	... ...	243	,,
	67	,,	... ...	297	,,
	59	,,	... ...	270	,,
	54	,,	... ...	229	,,
	14	,,	... ...	108	,,

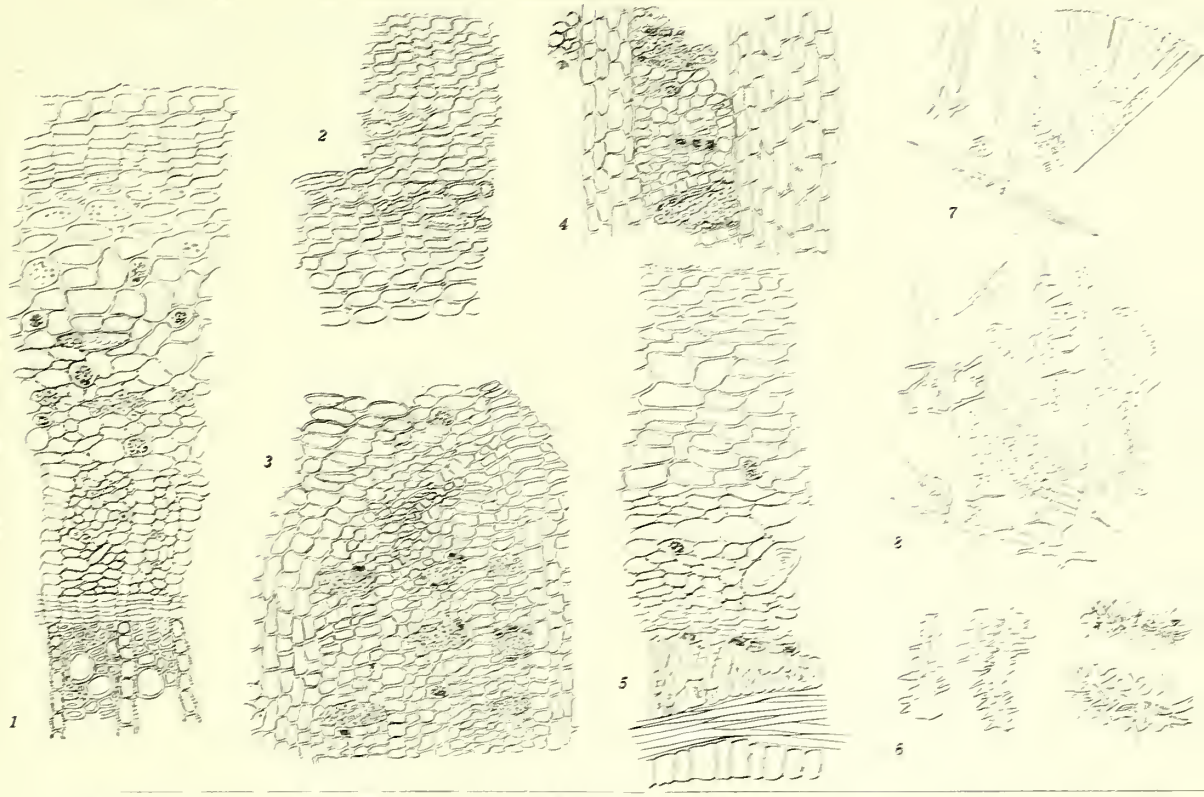
The distance of medullary rays from one another in the neighbourhood of the cambium is: 54, 81, 54, 67, 94, 94, 54, 40, 216, 81, 67, 40 microns. The phloem rays are small and comprise on the average across usually 3 to 5 with 20 rows of cells. The cork, as well as the



LEAVES AND BERRIES OF RHAMNUS FALLAX, BOISS.



SPECIMENS OF VARIOUS TYPES OF PEEL



Transverse sections of: (1) *peel 3 mm. thick;* (2) *periderm;* (3) *inner bark;* (4) *inner bark in the cambial region showing broad medullary rays;* (5) *pericarp.*
(6) *Isolated stone cells of sclerenchymatous endocarp;* (7) *Microsublimate;* (8) *Pyrosublimate.*

periderm, does not give the Bornträger reaction but the middle bark and inner bark, especially medullary rays, give an intense red.

Microchemistry.—Microchemical examination showed that anthraquinones were present in all phloem elements of the plant, and especially in the cotyledons and in the sclerenchymatous endocarp a very strong Bornträger reaction is given. It is very exceptional that an active principle should be found in the sclerenchymatous cells. By microsublimation an amorphous mass is obtained from which after two to three days, simple, acicular or composite groups of crystals separate. The amorphous and crystalline sublimate dissolves in alkalis giving a reddish colour.

Pyrosublimation.—The drug in very fine powder is treated by the Rosenthaler process. Above the powder contained in a test-tube a layer of asbestos is placed which serves as a filter. The test-tube, connected with an air pump and fitted with a thermometer, is heated in a sulphuric acid bath to 150-250° C., after which the air pump is operated. The "pyroproducts" which sublime on the walls of the test-tube are examined under the microscope. The bulk of the pyrosublimate is composed of amorphous masses of a bright green colour and of single crystals or composite acicular crystals. In the whole sublimate varying forms are found. The whole sublimate dissolves in alkalis giving a red colour. The anthraquinone content was determined by the Liptak method: 0.5 gm. of finely powdered bark was heated for a quarter of an hour with 50 c.c. of one-per-cent. sulphuric acid, the liquid evaporated to one-tenth of its volume on the water bath, and on cooling extracted with 50 c.c. ether so long as the ethereal solution gave the Bornträger reaction. From this the anthraquinones were extracted by means of caustic alkali, the alkali neutralised with hydrochloric acid, and the resultant deposit washed, dried and weighed.

Anthraquinone content as determined by the Liptak method

Cortex rhamni fallacis	No.	Weight of drug grams	Weight of residue	Per cent.	Remarks
Commercial samples	1	0.5	0.0174	3.48	Peel 1 mm. thick
	2	0.5	0.0191	3.82	Peel 2–4 mm. thick
	3	0.5	0.0225	4.45	Peel 2–4 mm. thick
	4	0.5	0.0336	6.72	Only endothecium of peel 4 mm. thick
Specimens collected by author	5	0.5	0.0284	5.68	
	6	0.5	0.0238	4.76	Peel 4–6 mm. thick with a bark
	7	0.5	0.0271	5.42	
	8	0.5	0.0547	10.94	Only endothecium of a peel 2 mm. thick

Conclusions:—

1. Cortex rhamni fallacis which is met with in commerce is derived from *Rhamnus fallax*, Boiss.

2. Old bark can be distinguished macroscopically from frangula bark by means of the lenticels.

3. Microscopically cortex rhamni fallacis is characterised by a sclerenchymatous ring in the periderm.

4. Anthraquinones are present in all phloem parts of the plant and also in the sclerenchymatous endocarp.

5. The Jugoslav peel is very rich in anthraquinones, peel 4–6 mm. thick contains from 4.5 to 6.1 per cent. anthraquinone; inner bark, i.e. medullary rays of the inner bark contain about 20 per cent.

6. Cortex rhamni fallacis is not an adulterant of frangula bark, but a drug very similar and a substitute, and is one of the drugs rich in anthraquinones.

Random Reflections of a Perfumer

On Toilet Creams and Other Toilet Preparations

By R. M. Gattefossé

Vice-President of the Syndicat de la Parfumerie, Lyons

SALES of toilet preparations increase year by year, and in order to turn out the quantity of products necessary to meet the demand, specialised manufacture and equipment of works solely for making these articles is developing. This trend without doubt is from a desire to put on the market those preparations only which have some hygienic value and which are really and truly efficacious in the care of the skin. As far as beauty preparations are concerned this has not always been the case. Without doubt starch and oxide of zinc are not products devoid altogether of value, but is it really certain that these two substances in conjunction with glycerin have a beneficial action on all skins? As for creams made with sodium or ammonium stearate, we can say at once that dermatologists are in agreement that beneficial action of these when used as an aid to feminine charm is extremely limited. The advice is frequently given that persons whose skins are sensitive should avoid the use of soap. Soap dissolves the natural fat secreted by the skin, and the trace of alkali which is set free on hydrolysis of soap by moisture is dangerous as far as the complexion is concerned; and every time soap is used a thorough rinsing should be carried out with the object of removing all trace of alkali. Now what actually happens when a toilet cream containing sodium or ammonium stearate is marketed is simply this: a soap in paste form is distributed which is rich in glycerin, but which often has been made with less precaution and care than the more ordinary commercial soap. The stearic acid employed is pure without doubt, but not any more so than the fatty acids of the soap boiler, and not more perfect than those in a good vegetable oil or purified suet. All question of chemical purity may be shelved for the moment, as it has not been proved that a compound, because it may call itself stearic acid or oleic acid, is preferable to the natural product from which it may originate. The soda used is the same as that used in soap boiling, and stearate of soda is just an ordinary soap, white enough as far as colour goes, but which has all the faults of a soap insufficiently boiled, and often insufficiently combined. The user of such simply rubs soap on his face and lets it remain there the whole day long. The application of such a preparation is on a par with a man, who, after he has finished shaving rubs into his skin the lather remaining on his shaving brush and leaves it there. I am not of the opinion that this would be a beneficial treatment for a woman's skin.

The conscientious manufacturer makes earnest attempts to avoid these errors and to give a woman products which may be beneficial for the complexion. The base of these cosmetics is generally a good oil, well purified, washed, decolorised, and filtered—and a good natural wax as beeswax, bleached without the aid of chemicals. There is nothing which approaches the products naturally secreted by a healthy skin, and nothing which " nourishes " (that is the term employed in advertising) so well the epidermis. Beeswax is a product extremely suitable for the conservation of the skin. It is readily absorbed, it softens the skin, giving it suppleness and " tone." All the ancient cosmetics were made with a beeswax basis. Mineral waxes as ozokerite and paraffin wax were not used, neither were the mineral petroleum oils, but even so coquetterie did not lose anything. Without doubt petroleum oils have the advantage over naturally occurring animal or vegetable oils in that they do not become rancid, but they lubricate less and are not at all fats in the strict sense of the term. Without a doubt their use in machinery lubrication offers manifold advantages, but the fine and silky texture of a woman's skin is not to be compared with a mechanical unit, and so it is futile to suggest any comparison between the two applications. Now purified white beeswax which occurs in commerce in flakes or granules (and not melted and cast into blocks or plates, because in this state it has been heated too long and too often, and is to be suspected of containing paraffin wax) is eminently suitable as a basis for cosmetics which are intended for the skin. This wax can be powdered readily; and mixed with the ordinary ingredients of a face powder gives it a velvety feel, a fineness and " body " that is really extraordinary. Here is a very simple formula: Granular white beeswax 5 parts, kaolin in impalpable powder 5 parts, starch 10 parts, talc 10 parts, colouring and perfume q.s. The whole finely powdered, mixed and sifted gives a powder whose properties will be appreciated by all users. A cold cream for night use can be prepared simply from the following: Granular white beeswax 2 parts, oil (mixture of white vegetable oil and petroleum) 20 parts, glycerin 5 to 10 parts, water containing a small quantity powdered soap 10 to 20 parts. The use of the pure powdered soap is practical, and this soap generally well made (if the powder is of a good brand) is preferable to stearate of soda. One can alter these formulas and modify them in many directions, increasing the amount of glycerin and the wax, diminishing the oil, increasing the quantity of water as desired according to the hardness, consistency and use of the finished product. It forms on the skin a transparent layer of good natural wax, and contains a minimum of those ingredients whose efficacy has not been well proved. Wax, on the contrary, is recognised as a reconstituent of the tissues and is employed in cases of serious burns, and can thus be employed with the certainty of showing a beneficent action in cases less severe. I do not wish to be disagreeable to makers of magnesium and zinc stearate, but I think that powdered white wax is better in a face powder than chemical products. This is the opinion of a chemist, who after thirty years of practical work is still conservative.

On Synthetic Perfumes

It is in the same strain that I wish to speak on synthetic perfumes, not in order to " brûler ce que j'ai adoré," as the saying goes, but to protest against certain exaggerations of the perfumery consultants. The reading of a certain number of volumes and works on practical perfumery would give the impression in short that if natural perfumes had never existed they would not have been needed. It is a big error, and one which should not be allowed to take root in the soul of the chemist-perfumer. I have before me a recent formulary, well edited, well thought out, and not without merit. One reads therein formulas of synthetic preparations. lilas, muguet, jasmin, etc., containing 980 grams of synthetic products and 20 grams of natural perfumery material. But it is not stated that these synthetic products cannot be used except with the addition of natural floral essence—and some think to do

well in employing only an infinitesimal proportion of natural floral essences. It is a rank heresy with which I do not desire to be associated. I have always maintained that a synthetic perfume might be an excellent addition to the natural product, but it cannot pass for one in the better class perfumery and *a fortiori* in the " parfums supérieurs."

French perfumery preserves its incontestable world supremacy. Now if statistics are studied it is seen that it is the French perfumers who consume the most Bulgarian otto of rose. and at the same time they produce oil of rose in appreciable quantity in the South of France. Cultivators of jasmin and other flowers have no better buyers than the Parisian perfumers, and there is proof of all this in the recent formation of an association between some houses of the Midi of France and of Bulgaria in order to rationalise the cultivation and distillation of flowers. A woman quickly learns how to appreciate and prefer the perfume in which there is a reasonable proportion and sufficiency of natural flower essence.

Colour and Concentration of Extracts

Extracts for the handkerchief are becoming more and more powerful; that explains their increased price. Indeed, a mixture of essential oils and floral extracts is sold analogous to those which are vended in the bazaars of the Orient, and which do not contain alcohol. I think, however, that it is always necessary to add a sufficient quantity of alcohol, as alcohol preserves and helps to volatilise the perfume. But an extract which in 1910 contained 20 grams of absolute 100 per cent. extract per litre of alcohol, which contained in 1919 100 grams, to-day contains 250 grams, and to-morrow will probably contain 500 grams. From the increasing concentration a problem presents itself, and that is how to obtain products sufficiently decolorised in order to conserve the aspect of the older, much less concentrated perfumes. It is necessary to employ for preference natural essential oils, rectified and decolorised; if necessary, terpeneless oils more soluble in a given quantity of alcohol; or to use floral extracts, decolorised, clarified. This decolorisation can furthermore be done in the finished solutions. Activated charcoal is increasingly used as a decolorant, and is much better than the animal blacks of preceding years. Makers of stills sell " conges " or recipients of tinned copper, and these have a worm for reheating and artificially maturing preparations, and an agitator. Half a gram of activated charcoal per litre of solution is added and the mixture is allowed to macerate for a day or two with frequent agitation. The preparation is then filtered in a disc filter under pressure, and the operation repeated as many times as is necessary to obtain a liquid sufficiently clear.

And now I conclude these random reflections which the actual state of the perfumery industry have inspired in me, and without a doubt that my *confrères* on their part look at our industry from the angle of the actual needs of the *clientèle*. Their own ideas will serve certainly for the advancement and the prosperity of our craft.

Hashish and Drugs in Iraq

By Jane Pyrves

As long as plurality of wives is the tradition, if not the invariable practice of the Arabs in Iraq, so long will the secret seller of drugs flourish, for in a crowded harem there is always someone hated enough for someone else to dare the penalties overshadowing the successful poisoner. About 90 per cent. of the medical practice of the country is in the hands of old wives, as is always the case among illiterates. In that sun-scorched country, bare of all green growth for seven months of the year, when Tigris water is worth its weight in silver rupees to the River Board, land is too precious for any except the wealthy to have a garden. Here, in a hidden corner along the rim of a tiny irrigation creek running through those few gardens, you may sometimes find a plant of stramonium flourishing under the graceful sprays of a pomegranate with its waxen scarlet flowers, or a tiny patch of greyish mauve opium poppy struggling beneath the huge green leaves of a banana; but on the whole, these self-appointed wise women rely upon the furtive visits of the secret vendor, and his myrmidons, of drugs, flitting from one harem to another, rather than a bold public purchase in the *sûq*.

Perhaps that is why, in the whole run of the labyrinth of covered-in bazaars that are such a fascinating delight to visitor and resident alike, you will only find three Arab drug sellers in the hundreds and thousands of tiny *khans* of every trade and handicraft. Though I passed the most prosperous of all perhaps three times a day, at all hours between sunrise and sunset for over six months, not once did I see him serve a customer. His bowls were of the wonderful green Persian porcelain, the colour they call the " colour of happiness." Each bowl had its lid of finest Persian brassware, and stood on its carved teak stand. Without their valuable contents of tobacco, snuff, hashish or drugs, these bowls were easily worth £50 apiece. There were over twenty of them there, as well as a marvellous old lacquer cabinet at the back of the *khan*, with thirty or forty locked drawers, the key of which hung from a woven band slung about the neck and thrust into the bosom of his silk robe.

The seller of drugs sat or squatted all day on a long teak stool, a low faldstool, with its cushion of striped Persian silk, beautiful enough to arouse murder in the heart of a collector. He sat there smoking his narghilé pipe, with its mouthpiece of amber set with blue silken tassels to keep away the Eye. Aloof, pontifical, easily the richest vendor in the *sûq*, he seemed to emanate a weary cynicism. Yet none saw him ever serve any customer or dispatch an order by any of the row of little boys sitting in the street outside, backs politely turned to the dealer of hashish.

Each of the two main streets of the city, New Street and River Street, has a single druggist's shop, where prescriptions can be made up and a few toilet articles purchased. At the better-known of the two the only things I could get, except for prescriptions always beautifully dispensed, were Cicfa, Pond's Cream, Cheesebrough Vaseline, Beetham's Cucumber and Glycerine, and Pears' Soap. Think of the enormous opening for essences to disturb the myriad flies, sand-flies, mosquitoes and flying beetles that make sleep impossible on hot nights. Citronella and oil of lavender were the only ones in stock. How one's hair comes out in hot weather! How plump some of us get! How quickly liver gets sluggish and appetite fails in the great heat! Electricity is available everywhere for freezing. That is not the difficulty.

This is a marvellous country for fruit. Oranges as big as a baby's head, tangerines the size of grape-fruit, mulberries the size of damsons, luscious green figs dripping pink nectar, melons that only need crushing and freezing to make a perfect sweet water ice without any flavouring, bananas with a richer sugar content and flavour than any grown elsewhere on the globe.

Freights are falling. Money is " easy come by, easy go " in Iraq still; though it is not quite the Tom Tiddler's ground that it was, there are still fortunes to be made by those who know how to bait well.

Oppenheimer's New Home

A Visit to the New Laboratories of a Progressive Firm

THE remarkable development in the business of Oppenheimer Son & Co., Ltd., has necessitated the building of larger and more modern premises. The new laboratories are situated about half-way along Clapham Road, London, S.W.9, and greatly add to the amenities of that district. The architectural design—enhanced by the use of white Doulton ware—strikes a modern note. The premises comprise three floors and a spacious basement. In the entrance hall, which is of marble, our representative was cordially welcomed by Mr. C. E. Franklin Vallet, Ph.C., chairman, from whom a few facts were gleaned concerning the history of the company.

Historical

Mr. William Oppenheimer, the founder of the business, was born at Manchester in 1849. He commenced trading in London, along with his brothers Henry and George, as drug exporters and general merchants, the bulk of their business being done with South America, where their father had considerable landed interests and good commercial standing. The firm name then was Oppenheimer, Brothers & Co., and the headquarters were in Sun Street, Finsbury. The staples of business at this time were drugs, chemicals and galenicals with a large assortment of druggists' sundries and perfumery. In 1901 the business was, as Oppenheimer Son & Co., Ltd., converted into a limited liability company, with Mr. William Oppenheimer as sole director. The company started operations in Worship Street, E.C. Mr. William Oppenheimer, although not a trained chemist, knew the practical part of the business well, and in 1891 produced, at the British Medical Association's exhibition, the first specimens of the palatinoid, reported in the columns of THE CHEMIST AND DRUGGIST at the time as "one of the sensations of the exhibition." The business so developed that a removal was made to Queen Victoria Street in 1898, and a factory was started at Kennington—on the site of the present new laboratories. Mr. William Oppenheimer died in 1906, and was succeeded by Mr. A. W. Ball and Mr. T. Oliver Kent, who jointly occupied the chair until the death of the former in 1922. The chairmanship then remained with Mr. T. Oliver Kent until the recent amalgamation with the "Sanitas" Co., Ltd., when he retired, to be succeeded by the present chairman, Mr. C. E. Franklin Vallet.

The Roboleine Laboratory

One of the principal products of the firm is the well-known proprietary, Roboleine, and no expense seems to have been spared in assuring the success of this preparation. The special Roboleine laboratory has been fitted with the latest and best apparatus. The scrupulous cleanliness prevailing is especially noticeable, and our representative was informed that it is the duty of certain members of the staff to scrub down every inch of the laboratory once a week—a creditable performance. Emphasis is laid on the fact that throughout the whole process nothing is touched by hand and the most ingenious machinery has been installed to achieve this end. The preparation, owing to its nature, is essentially difficult to handle, but years of experience have resulted in the evolution of methods whereby easy manipulation is assured. Roboleine is made in a battery of eight copper steam-jacketed pans having a total capacity of two tons. Each pan is fitted with two revolving blades which churn the ingredients for about two hours. Heat is applied by means of steam and power by an electric motor. Any individual pan may be operated by simply throwing the appropriate starting lever into gear. While viewing the pans it is interesting to notice, from old models which have been retained for special formula work, the gradual improvements effected through the years of use. The first designs were simply ordinary copper pans with hand-cutters. Then came pedal-cutters and finally the present-day elaborate Robert's patent electric self-weighing machines, through which the Roboleine passes on its way from the pans. A clever labelling apparatus was noticed, the Purdy patent, with a capacity of twenty-five jars per minute. This machine lifts, gums and presses each label, the only manual assistance necessary being the feeding with jars. Owing to the heavy nature of Roboleine some difficulty is to be expected in transporting loads. This has been overcome in two ways; first by the use of a jack-truck, taking good loads with hardly any physical effort (a girl can work this easily), and secondly by having direct communication with the packing departments through sliding wall-panels. The jars are placed on trays under which the jack-truck is wheeled; pressure on the handle lifts the load, when the truck can be easily pushed. Another interesting feature of this department is the Karl Kiefer washing machines. The jars are first washed in the ordinary way, placed upside down on a slowly revolving table, each over a



OPPENHEIMER'S NEW HOME



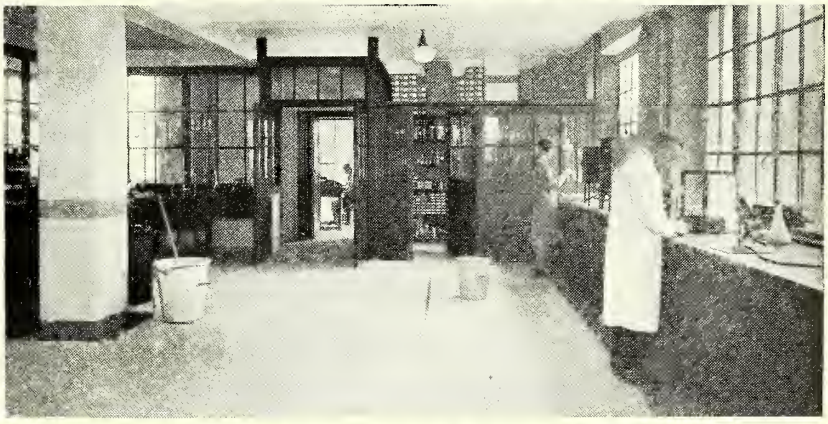


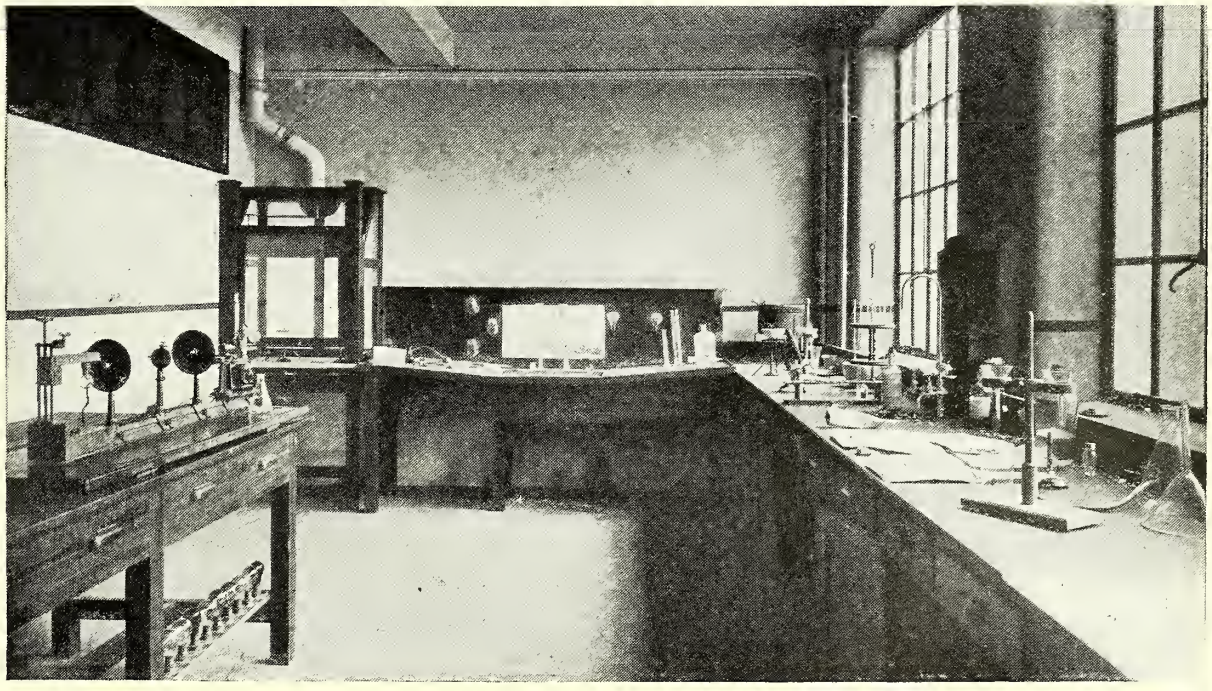
ENTRANCE HALL
Above (left)

GENERAL OFFICES
Above (right)

ORGANOTHERAPEUTIC DEPARTMENT
Centre

ANALYTICAL LABORATORY
Below







EXPORT PACKING DEPARTMENT

spray nozzle; water is then sprayed during one half revolution of the table. The jars, now thoroughly clean, are transferred to the drying machines, which are worked on the same principle, hot air instead of water being pumped through.

Basement and Ground Floor

The basement of a factory is frequently of little interest, but in Oppenheimers the reverse was the case. The engineer in charge was good enough to explain the unusual features, particularly the heating and hot-water supply systems. Two large Economic boilers by Davey, Paxman & Co., Ltd., were in operation for this purpose. The boilers are oil fed, tending for cleanliness, essential in such an establishment. The only drawback to this system, as far as could be ascertained, is the impossibility of banking up the boilers nightly to insure an adequate supply of heat in circulation in the morning. The export and home packing departments were next inspected. The former is the more interesting, and in it were noticed cases awaiting dispatch to many countries. Some of those easily seen were consigned to Australia, South Africa, India, America, Chile and New Zealand.

Special Departments

The first floor comprises the pharmacy laboratory, gelatin room, palatinoid packing room and dangerous drugs department. The pharmacy laboratory is well equipped and is capable of turning out large quantities of specialities. Modern machinery has been installed, including the latest ointment filling machines and special centrifugal mixing machines for Maglactis. The process of preparing gelatin as a coating for palatinoids depends for its success on skilful manipulation by the operator. The gelatin, previously coloured, is warmed and poured on a sheet of glass; a dexterous movement and a film of even thickness is obtained. The film is then allowed to cool, and the gelatin afterwards cut into convenient sizes. As nothing is touched by hand, special counters are employed in the palatinoid packing room. These are made of perforated metal, and take quantities of 50, 100 and 144. Prescription triturations, after mixing in the laboratory, are compressed in this room. A large stock of special formula palatinoids is kept in readiness to meet urgent demands. The requirements of the Dangerous Drugs Acts are effectively complied with in a special room set aside for the purpose. The machine room, the last to be visited on this floor, was a veritable hive of industry. Eleven machines were in operation coating and polishing tablets, eight in compressing tablets, while at the far end a battery of mixing machines was "full out."

Organotherapeutic and Analytical Laboratories

One of the most important units in the establishment, the analytical laboratory, was next viewed. Situated on the third floor the laboratory is equipped with modern apparatus, and can easily accommodate almost any type of research. Adjoining the analytical laboratory is the organotherapeutic department where our representative was introduced to the chemist in charge, who explained the various processes going on. This room is kept busy producing special injections, colloids, pituitary, red bone marrow, pessaries, rectones, etc. A vacuum still plant was in operation, and special cultures were being prepared. The top floor has been turned into a social club for the staff.

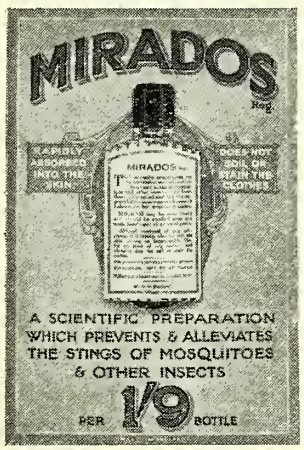
In conclusion, a word as to the general offices. These have been removed from Queen Victoria Street, E.C.4, to the new laboratories. The accommodation is excellent and, with the organisation under one roof, greater efficiency should result.



BATTERY OF ROBOLEINE MIXING PANS

Trade Notes and Novelties

THE coloured advertisements have always been one of the outstanding features of the Special Issue, and in that respect it may be justly claimed that this number well maintains the high standards set by its predecessors. There are, for example, striking insets by W. J. Rendell, Ltd., and Stevenson & Howell, Ltd. In addition there are four subsections on special papers, which give distinction to the announcements appearing on them. The wholesale houses concerned are:—*Primrose:* Potter & Clarke, Ltd. *Brown and purple:* P. H. Galloway, Ltd.; Glaxo, Meggeson & Co., Ltd.; H. R. Napp, Ltd. *Green and black:* Jeffreys, Miller & Co., Ltd.; George King & Co., Ltd.; Leyland & Birmingham Rubber Co., Ltd.; Robinson & Sons, Ltd.; Warrick Brothers, Ltd.; White, Tomkins & Courage, Ltd. *Red and black:* The Allcock Manufacturing Co.; The Avenue Press; Alfred Bishop, Ltd.; G. Brown; Dee Oil Co., Ltd.; The Gem Automatic Weighing Machine Co., Ltd.; Harris, Hart & Co., Ltd.; Hirst, Brooke & Hirst, Ltd.; Lax & Shaw, Ltd.; Lipvac Flask Co.; Methylating Co., Ltd.; Mysore Trade Commissioner for London; Sandoz Chemical Works (London); Edward Taylor, Ltd.; United Glass Bottle Manufacturers, Ltd.; James Woolley, Sons & Co., Ltd. There is also a proprietary medicine section (*blue on green*), wherein the following advertisers call attention to their products:—Acton Pill & Tablet Co., Ltd.; Benbows Dog Mixture Co.; J. Brittain Hart, Ltd.; Mandall & Co., Ltd.; The Marie Antoinette Co.; Stephen Matthews & Co., Ltd.; The New Era Treatment Co.; Proprietary Articles Trade Association; A. Q. Tucker & Co., Ltd.: Tytoxa Products, Ltd.; G. Whelpton & Son, Ltd.; Yadil Products (1925), Ltd.



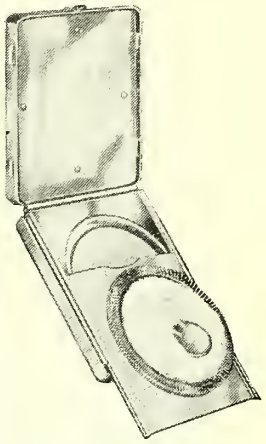
MIRADOS is a liquid prepared in R. Demuth's Laboratories, 68 Salusbury Road, London, N.W.6, for use in preventing and alleviating the pain from insect stings. The illustration is from the showcard which is being issued in connection with this product, and further details relating to it, as well as Carnate nail polish and Frozoclone, will be found in the advertisement pages. The last-named is to be the subject of extensive advertising in the near future.

SOUPLEX, LTD., Westgate, Morecambe, announce reductions in the prices of their Souplex and Morkam safety razor blades.

DRAYTON PAPER WORKS, LTD., South Park, Fulham London, S.W.6, manufacture all kinds of wrapping papers, both in rolls and flat sheets, including chemists' demy. Another line of interest to chemists is their Gold Medal toilet papers in rolls, cartons and packets. These can be supplied with own name bands if ordered in quantity, and the company will be glad to quote for any special requirements.

PRUNOL PASTILLES.—Prunol Products, Ltd., 21 Cockspur Street, London, S.W.1, are shortly introducing a new line in the form of Prunol pastilles, which should be appreciated by travellers and by those who do not care for the jelly. Each pastille contains the equivalent of a spoonful of Prunol, and is stated to consist solely of the same ingredients. An attractive style of packing has been adopted and each tin contains a dozen adult doses.

NEW NILDÉ PRODUCTS.—Nildé (Paris) Agency, Ltd., 258 Euston Road, London, N.W.1, are putting on the market three new lines, which it is anticipated will achieve the same popularity as those that have already made the company's name so well known. An invention that will appeal to ladies is a vanity box, which in closing makes a soft compact of ordinary face powder. Among the advantages derived from the use of this box (shown in the illustration) are that a softer puff can be employed, the compact is always remade, and when empty the box can be refilled. The box is beautifully made, and contains both a mirror and a puff. The other new lines are Poudre Crème and Poudre Crème Rouge Invisible. These are packed in the usual style and not in sifter boxes.



SPENCER BROTHERS, 39 Shoe Lane, London, E.C.4, one of the most up-to-date puff manufacturers in the trade, are associating their products with aeronautical achievements by bringing out the Flight series of velour pads and handkerchief puffs. Both are available in assorted colours, the handkerchiefs being of crêpe-de-chine and georgette. They are attractively packed for counter display.

LIPVAC FLASK CO., 84 Leadenhall Street, London, E.C.3, have sent us a specimen of the latest model of their vacuum flasks, known as Lip-vac 50; it embodies some new ideas which should make it a popular line. The cup is made of "vaculite," a material which is unbreakable, does not get hot to the touch, nor does it have that curious "taste" associated with so many of these drinking vessels. The lip of the flask is so shaped that liquids pour with stream-like smoothness, and the glass is stated to be the strongest obtainable. The cork has a special top, which facilitates its extraction. The flask is available in various colours and in pint and quart sizes.

DYANESE DYES.—J. E. Ellis, Ltd., Horsforth, Leeds, are the selling agents for the dyes manufactured by Dyanese, Ltd., products which are stated to be of a colloidal nature and particularly suitable for use on such delicate material as acetate silk, milanese, georgette



and crêpe-de-chine. The illustration depicts a show cabinet fitted with dummies, which is supplied with every order for one gross of stocking dyes. Dyanese is claimed to be the only home dye that will dye the celanese type of artificial silk and mixtures containing this material.

Marriages

ATHERTON—WATSON.—At St. George's Church, Blackburn, on June 17, Harry Haworth Atherton, chemist and druggist, to Winifred Watson.

GREENFIELD—DOUTHWAITE.—At St. George's Church, Sheffield, recently, Rex Youhill Greenfield, L.D.S. R.C.S., only son of Mr H. H. Greenfield, chemist and druggist, Doncaster, formerly of Hunter's Bar, Sheffield, to Elsie Mary Douthwaite, Sheffield.

WALKER — ROWSELL. — At Withycombe Raleigh Wesleyan Church, Exmouth, on June 21, George Walker, Ph.D., to Phyllis Florence, only daughter of Mr. Philip F. Rowsell, J.P., past-president of the Pharmaceutical Society and governing director of Holman, Ham & Co., Ltd., chemists, Exeter.

Deaths

COWLEY.—At Brisbane, Queensland, Australia, on May 2, Mr. Robert Charles Cowley, Ph.C. Mr. Cowley was as well known in this country, at any rate to the older generation of pharmacists, as in Australia. He passed the Major examination in 1891, five months after qualifying. He succeeded Mr. Ward as principal of the Liverpool School of Pharmacy (where he had studied) in 1893, and while in Liverpool served as secretary and as president of the Liverpool Chemists' Association and for two years as secretary of the Federation of Local Pharmaceutical Associations. In 1908 Mr. Cowley accepted the post of director of the Queensland College of Pharmacy, Brisbane. His life in Queensland was a strenuous one; in addition to his college work, he was editor-in-chief of an edition of the Australasian Pharmaceutical Formulary and general secretary of the Australian Pharmaceutical Conference. During the war Mr. Cowley attained the rank of captain in the Commonwealth Military Forces. He contributed numerous monographs to the proceedings of the British Pharmaceutical Conference and to "The Australasian Journal of Pharmacy."



MR. R. C. COWLEY, PH.C.

MARSHALL.—At his residence in West Green Road, Tottenham, London, N.15, on June 19, Mr. Hay McDugald Grant Marshall, chemist and druggist, aged sixty-three. Mr. Marshall was born at Coldhome, Boharm, Elgin. He was apprenticed to the late Mr. J. Young, Elgin (afterwards Lord Provost of the city), and, after a period as assistant with Fraser & Green, Ltd., Glasgow, qualified in 1888. He gained further experience in London with Corbyn, Stacey & Co., Ltd., and with Squire & Sons, Ltd., becoming senior dispenser at Messrs. Squire's, where he returned after an interval as manager at a Wood Green pharmacy. In 1894 Mr. Marshall opened a business in Upper Clapton; in 1912 he went to South Tottenham, where he successfully developed a pharmacy, and in 1923 took over the business of the late Mr. Byass Jones as a branch. Mr. Marshall had no leisure for public affairs, but found recreation in golf, and was for many years a member of the Crews Hill Club. He leaves a widow, a son and a daughter.

Personalities

MR. ALFRED HIGGS, J.P., chemist and druggist, Kingston-on-Thames, and MRS. HIGGS celebrated their silver wedding on June 20.

MR. E. J. READMAN, chemist and druggist, Friar Gate, Derby, has retired from business and will reside at Caldicott, near Bedford.

MR. H. A. PENNEY (The Harry A. Penney Co., Ltd., Great Portland Street, London, W.) is sailing for the United States on June 28.

AMONG the large number of gifts received by Miss Rowsell of Exeter on the occasion of her marriage (p. 790) was a canteen of silver from the South-Western Pricing Committee, of which her father, Mr. Philip F. Rowsell, has been chairman for several years.

"PROSPECTS for Women in Pharmacy" is the title of an article by Mr. A. O. Bentley, Ph.C., head of the pharmacy department of Nottingham University, in the current issue of the "Journal of Careers."

MR. A. PROCTOR ATKINSON, sales manager of Eno's Fruit Salt and Thermogene, 160 Piccadilly, London, W.1, who has resigned his position in order to take up an important appointment with a firm of manufacturing chemists in Southampton, has been presented, on behalf of the board of directors, with a silver tea service and a silver tray suitably engraved, as a token of appreciation of his loyal and devoted service during the last nine years. The members of the staff have also expressed their regard for their colleague by a gift of a leather suitcase, a document case, and a silver cigar and cigarette cabinet bearing an inscription. In acknowledging the presentations, which took place at 160 Piccadilly, Mr. Atkinson spoke of the regret he felt at the severance of his association with the company. We understand that Mr. Atkinson will be succeeded by Mr. T. H. Draper as home sales manager and by Mr. Gordon Dunbar as export sales manager.

Wills

MR. EDWARD THOMAS ABEL, of 10 Blaendare Road, Pontypool, chemist and druggist, who died on March 14 last, left property of the gross value of £2,368 11s. 8d., with net personalty £1,243 15s.

MR. FRANK OLDHAM, J.P., of Wisbech St. Peter, Cambridge, chemist and druggist, who died on January 1 last, aged seventy-two years, left £17,152 12s. 7d., with net personalty £9,418 8s. 9d.

MR. ROBERT BASIL LAMBERT, of Cawood, Yorks, grocer and chemist and druggist, who died on December 28 last, aged forty-two, intestate, left estate of the gross value of £2,459 16s., with net personalty nil.

MR. EDWIN ERNEST PRICE, of "Southlands," Buckingham Crescent, Christchurch Road, Newport, Mon., chemist and druggist, for many years manager of Boots, Ltd., of Newport, who died on December 3 last, left £335.

MR. JOHN PARK, of 3 Northumberland Gardens, Newcastle, and formerly of Westville, 328, Heaton Road North, Newcastle, for many years northern area representative of Evans Sons Lescher & Webb, Ltd., Liverpool, left gross estate of £3,262, with net personalty £2,557.

MR. JOHN ALEXANDER WOODSIDE, J.P., Ph.C., of Ballymena, Co. Antrim, manufacturing chemist, a director of Gilmer, Ltd., chemists, of Ballymena, and Harmur, Ltd., chemists, of Ann Street, Belfast, who died on September 18 last, aged sixty-two, left personal property in Great Britain and Northern Ireland valued at £22,980 3s. 2d.

Observations and Reflections

By Xrayser III

Your Regret

that the occasion of the appearance before the Royal Commission on Licensing of the witnesses for the Board of Customs and Excise was not fully taken advantage of (*C. & D.*, June 21, p. 759) will be shared by all who have at heart the retention of old-established chemists' privileges. It is nearly a hundred and ninety years since it was enacted that exemption should be extended to spirits or spirituous liquors used by medical practitioners and chemists in the preparation and making up of medicines, and the system has worked so satisfactorily over this long term of years that it seems unreasonable now to disturb it. More particularly is it unreasonable that modification should take the form, as you so clearly put it, of throwing open the field of business without distinction. The legislative exemption in our favour has come to possess a definite value to every chemist and druggist keeping open shop for the compounding and dispensing of medicines, and any proposal to extend the exemption to shopkeepers who are not qualified as chemists can only be described as inequitable. It is not clear from your article that the two officials who gave evidence before the Commission on behalf of the Pharmaceutical Society and the Union entered any protest against this retrograde step, though they must be held to have failed in their obvious duty if they did not do so. Steps should certainly be taken on our behalf to secure any necessary confirmation by Parliament of the old-established privilege, and meanwhile to induce the Board of Customs and Excise to do as you suggest, viz., reaffirm the departmental rule which has confined to medical practitioners and chemists the right to sell medicated spirituous preparations without licence.

Dispensing and Prescribing

are made the subject of unconsciously humorous statements in the all too brief appendix to a report of the Examination Committee of the General Medical Council (p. 743). At the outset it is solemnly stated that the medical student must know how to dispense and prescribe with accuracy, but no reason is advanced for the reference to dispensing, neither is it manifest why ability to dispense should precede ability to prescribe. Then follows a curious reason for maintaining a high standard of accuracy in prescription-writing and in modern dispensing, viz., the utility of many potent drugs! But is it not about time that the General Medical Council omitted from its requirements in medical training any acquaintance with the dispensing of medicines? Everyone who has looked into the matter knows that the knowledge of dispensing acquired by medical students is perfunctory in the extreme; and it ought to be recognised as a matter of principle that medical practitioners have no business whatever to meddle with the subject of dispensing. In any other European country but this, they would not be allowed to have anything to do with the supply of medicines, and it is a grave reflection upon the controlling body in British medicine that it permits what is disallowed in other civilised communities to continue here.

"The Progress of Pharmacy

and Allied Sciences," which appears from time to time in your pages, is one of the most stimulating contributions to the pharmaceutical literature of the day. It must be confessed that one's reaction is not the one which might usually be expected. For the most part the stimulus is to attempt the application, or confirmation, of the new information therein contained. On the other hand, there is sometimes aroused a desire to return to the old drugs and try the old methods to ascertain if, after all, our predecessors did succeed in obtaining the remarkable cures they so laboriously put upon record, which records we have often too ruthlessly brushed aside as the outcome of an indiscriminating will to believe. An instance illustrating this occurs in your issue of June 21 (p. 749), under the heading "Carotene as Precursor of Vitamin A." Until quite recently no one would have seriously regarded the root of the carrot as a drug. What the writers of classical times had to say of the remedial virtues of carrots refers to the Cretan carrot and almost entirely to its "seeds" (fruits). Even so, Culpeper (1651) states that he "omits what vertues Galen writes of them, as being confident between them [*sic*] that our Carrots will never answer those effects." It was on account of the fabulous properties alluded to by Culpeper that the drug found a place in the changing formulas of the great theriacæ from the time of Mithridates of Pontus down to the early issues of the London Pharmacopœia, in which the carrot "seeds" were official for compounding the antidota.

For a Short Period

the roots of the garden carrot—*Daucus nostra*, as our great-grandfathers called it—were recognised as an official drug in the *Pharmacopœia Londinensis*. They were introduced into the 1809 edition, and continued in favour until the last edition of 1851. Towards the end of the eighteenth century the roots of the garden carrot were recommended for use as a poultice for suppurating sores, and they seem to have been extensively employed—so much so that the remedy attracted the notice of some members of the medical faculty. Fresh and juicy carrots were grated and mixed with water to a suitable consistency and applied two or three times a day. It is stated that frequently "cancerous and phagædenic ulcers" were cured by this means alone, and that generally there "was a great amendment of the state of the sore." A Dr. Richard Walker of Oxford gave his attention to the new remedy, and published an account of his inquiries and experiments in "Observations on the Efficacy of Carrots in the Cure of Ulcers and Sores" in 1806. He followed this up by writing in the "Philosophical Magazine" another article, "Observations on the remarkable Efficacy of Carrots, under a new mode of Application, in the Cure of Ulcers and Sores." The "new mode" he adopted was to slice the carrots transversely (not longitudinally, as usually recommended), boil until quite soft, and then beat to a moist pulp with pestle and mortar. Walker's account of his success at the Radcliffe Infirmary is most impressive. He says that some have thought the beneficent results were due to carbonic acid which the sore "imbibed" from the moist carrot. He thought it was to be ascribed to what he called the "mild anti-putrescent quality of the remedy." In view of the new light now being thrown upon the remarkable activity of carotene, one wonders whether it is not here that the "anti-putrescent" property resides. This aspect of the matter acquires a little more importance when it is recollected that a hundred years ago carrot marmalade was recommended for use among seamen as a preventive against the scurvy. It was the success of the cataplasmic observations which made carrot root official for about half a century.

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Editorial Articles

We Look Forward

THE proceedings of the recent Imperial Press Conference were signalised by the clearly expressed hope that newspapers would, in the course of events, be able to make increasing use of colour and of the photogravure process. The hope has a particular interest for us by reason of the fact that in our Special Issues, for some years past, we have made use of both these accessories of the printer's craft. Our annual Special Issue thus becomes a gesture, a symbol or a foreshadowing of the service that we may eventually be able to give our readers. This year we have enlisted the help of several old and a few new contributors. Turning first to the section in photogravure, we are fortunate in receiving from Dr. Charles Singer another of his "Sketches in the History of English Medicine," the lucidity and charm of which are by this time familiar wherever THE CHEMIST AND DRUGGIST is accessible, that is to say, in most parts of the world. On this occasion Dr. Singer envisages the seventeenth century as marking "the beginning

HISTORY OF ENGLISH MEDICINE

of the true scientific period," and passes in review the work of William Gilbert, Philbert Guybert, Harvey, Sydenham, Boyle and Thomas Johnson (with a glance in conclusion at John Mayow), making evident by his brilliant marshalling of facts the immense advance in medicine between 1600 and 1700. Numerous illustrations, some of which are almost unknown, accompany this monograph. A few pages later will be found a characteristic contribution by the veteran botanist, Mr. E. M. Holmes, who, under the title "Three Hundred Years of Cinchona," sets forth the history of the introduction of the bark into Europe. "The English Remedy," referred to in the course of the narrative, gives quaint details of the price of cinchona:—

"When it was only in the hands of the *Jesuits* it was sold at *Rome* and *Paris* for *Eight* or *Nine* Shillings *Sterling* the *Dose,* which consisted only of *Two Drachms;* but so soon as *Droguists* began to Trade in it it began to fall in Price, so that *Three* or *Four* Years ago the best might have been had for about *Forty* Shillings the Pound weight; but no sooner began the *English* Remedy to be in vogue, but men began every where to make Experiments with the Bark of *Peru,* which much enhanced the value of it: yet that was not all which raised it to the highest price; for Sir *Robert Talbot* observing that *Febrifuges* were prepar'd which came very near his own, and fearing least [*sic*] some body at length might discover it, resolved to buy up all the *Quinquina* that he could find at *Paris,* and the other chief Towns of *France,* and of *England* also."

A satirical cartoon advertised in January 1679-80 represents powdered cinchona as being sold at £15,000 a dose. Most of the illustrations accompanying Mr. Holmes's narrative are probably unknown save to experts. The other contents of this section comprise a brief historical sketch of Cardiff (this year's meeting place of the British Pharmaceutical Conference), a more interesting city than is generally admitted; a delightful study by Professor Van der Wielen, entitled "The Mortar and the Gaper," dealing with one of the curiosities of pharmacy; and an authoritative account, by Mr. Fritz Ferchl, of numerous works of art to be found on the Continent representing Christ as a pharmacist. A few of the photogravure pages are devoted to pictures with a minimum of descriptive text: these include some striking interiors, pharmacy signs, apparatus and so forth, and our indebtedness in this respect to well-known correspondents is duly acknowledged. For our colour plates we have this year selected two subjects in wide contrast. The first plate consists of two miniatures from the "Tacuinum Sanitatis in Medicina," a work of an Arabian physician translated into Latin about the year 1276: these form a kind of complement to the illuminations from a thirteenth-century manuscript which were reproduced in our Special Issue of last year. As will be seen from the inscription, the copy from which the miniatures are taken is in a well-known library in Rome, and is one of the three copies known. The second plate reproduces "Swallowing a Pill," a cartoon by M. Egerton, a comparatively unknown artist whose work was published in the early part of the nineteenth century. The illustration in colour on the cover is derived from the House of the Vettii at Pompeii, excavated in 1894-95, and preserved with its paintings and other decorations *in situ.* Our reproduction shows Cupid making and vending perfumes (or, according to one authority, medicines), a painting dating from before 63 A.D., and recently photographed by Fratelli Alinari. Turning to the other contents of this issue, the first in order of length is an historical account of Press advertising, with special reference to pharmacy and the drug trade, from its beginnings in the middle of the seventeenth century to the end of the eighteenth, by which time methods of publicity were becoming more like those with which we are familiar to-day. A brief but important article by an anonymous expert gives an exposition of "The Libelle of Englyshe Policye," a pamphlet in rhyme dating from about the year 1436, and throwing welcome light on the mercantile conditions of the period regarding drugs and other commodities. Such finds are few and far between. A noteworthy piece of original research is embodied in an article by Professor Dr. A. Vrgoc, of Zagreb University, on the pharmacognosy of *Rhamnus fallax* bark, in which are given macroscopical, microscopical and other data. The intriguing title, "Random Reflections of a Perfumer," heads a useful conspectus, by Mr. R. M. Gattefossé, of toilet preparations chiefly from a hygienic point of view, embodying some wise suggestions. Dr. Giovanni Carbonelli, of Rome, whose name is quite familiar to readers of THE CHEMIST AND DRUGGIST, has favoured us with an article on the sale of drugs in Venice during the Middle Ages, basing his remarks on pictures surviving from that period. Practical pharmacy is well represented by Mr. Herbert Skinner's article on ointment bases, in which freshness is imparted to a well-discussed subject, particularly regarding the absorption and subsequent action of medicaments. Informative articles on the manufacture of pharmaceutical or other products of importance to chemists have always occupied a prominent place in the Special Issue, and this year an account is given of a tour through the works of The Leyland and Birmingham Rubber Co., Ltd. Of the same nature is a description of the new premises of Oppenheimer, Son & Co., Ltd., where modern plant has been installed to cope with increased production. In view of the importance of the business in American "botanicals," we asked a leading authority in that country to write us an account of the production, collection and marketing of these products. His views on the subject are given in an instructive article with illustrations. Another contribution that should increase the interest of retailers in wholesale markets is a comprehensive survey of the commerce of isinglass, the details of which have hitherto been inaccessible. Current news will be found under the usual headings; and the extensive advertisement section, with its own index, should help our subscribers by presenting them with new ideas.

VARIED LITERARY CONTENTS

ORIGINAL RESEARCH REPRESENTED

Chemical Market Review

In reviewing the condition of the chemical markets and the general position during the first half of this year it is apparent that there is little to warrant satisfactory comment or optimism for the future. It is indeed doubtful whether the markets have experienced such a continued spell of depression since the war. The slumps of former years when values were getting down to normal were difficult times, but there was always a steady and fairly good flow of business. The markets may have been unsteady, but there was not that widespread lack of business which has been recorded week after week during the past months. The movement in values has been of small dimensions. In some cases a small decline is noted, while in a few instances advances in quoted values are recorded, these being due to the formation of price conventions. As a whole, the markets have been remarkably steady, although in a number of products the position has been in buyers' favour, due to keen competition on the part of weak holders. A few new price conventions have come into operation since January, with Continental and home makers working in agreement. Without these agreements it is reasonable to suggest the markets in these products would have fallen to pieces. As it is, it is not difficult to buy most of the controlled products at a fair discount on the standard rates.

Convention Prices and Consumption

Producers of most of the pharmaceutical products have protected their own interests, both against overproduction and declining markets, by co-operating with their competitors, but, in doing so, have they put a check on consumption? In their favour it could be argued that stabilised values should have encouraged a steady demand. On the other hand, it might be said that convention prices at high levels have a natural tendency to restrict consumption. In reviewing the whole industrial position, however, it becomes apparent that, with or without so many combines and conventions, the demand for chemicals would have altered but very little, the depression in our markets being certainly no worse than in those of many materials, products and manufactured articles. The chemical trade is a fairly reliable barometer of the state of industry generally, and the present slackness of the markets is definitely due largely to industrial depression.

Price Movements Slight

During January and early February a moderately good business was done in pharmaceutical products, but for the remainder of the first six months of the year conditions have been quiet to slack, almost without exception. Price movements have been mostly limited to small fluctuations, those to cheaper prices being due to price cutting on forced liquidation of stocks by weak holders, and those to higher values on account of the introduction of a price ring. All the conventions governing values have withstood the long spell of bad trade, but, although standard rates are quoted, as has been said, it has been usually fairly easy to find sellers willing to discount them. Amidopyrin is 3d. per lb. dearer as now quoted at 12s. 9½d. to 13s. 3½d., but the market is easy and dull. Aspirin has remained unchanged for the six months, under agreement between home and Continental makers, but lower prices have been taken in some quarters. Barbitone is slightly easier, and has been dull throughout, closing at about 7s. to 7s. 3d. In bromides, prices on the six months show an all-round decline, due to exceedingly keen competition in the early months of the year. Imported material was leading the market for a time, and latterly home makers have become strong competitors for what business there was. At the moment, although it is believed efforts have been made in that direction, there seems to be little hope of a Convention being formed to stabilise the position. In January the ammonium salt was 1s. 10d. to 1s. 10½d., and is now about 1s. 9d.; potassium crystals have weakened from 1s. 6d. to about 1s. 5d., and granular from 1s. 5¾d. to 1s. 4¾d. and 1s. 5d. Sodium commenced the year at 1s. 9d., and is now in the region of 1s. 8d. per lb., and slightly less in all cases for large quantities. In borax and boric acid, quoted prices have been fairly steady, and the competition between the two chief sources of supply seems to have been eliminated. In the case of the acid it is possible that values may advance, as they are at present at rather low levels. Citric acid (B.P. crystals) has, so far, been one of the failures of the year. Usually prices advance on a fairly busy market during the latter part of the first six months, but the trend this year has been the reverse. In January, foreign on spot and to arrive was round about 1s. 11d. to 1s. 11½d., less 5 per cent. Throughout the six months the market has gradually fallen away, and is to-day unsteady at about 1s. 5¾d. to 1s. 6¼d., less 5 per cent. The demand has been fair, the trouble being a glut of supplies with many weak holders. The season is now well advanced, and it is not easy to believe there can be much of a revival during the next two or three months; in fact, it would be unwise to assume that present prices will be maintained as the season progresses. Cream of tartar is another seasonal product that has moved in the opposite direction to that usually anticipated, and shows a considerable loss with the demand on the small side. Opening at 102s. 6d., less 2½ per cent., quotations for foreign have gradually weakened to about 92s. to 93s. per cwt., less 2½ per cent., with the market unsteady.

From a Feather Bag

A twentieth-century Hamlet might find matter for discourse in a paper by Miss C. Olive Griffiths that appears in the current issue of the "Quarterly Journal of Pharmacy and Pharmacology," entitled "Examination of Coca Leaves Found in a Pre-Incan Grave." It appears that leaves answering this description were lately forwarded to Professor H. G. Greenish with a request that they might be examined for the presence of coca alkaloids. The bag in which such leaves are packed before being deposited as part of the funerary equipment of a mummy is composed of red and black feathers, and measures about six inches in length by four inches in width. We are told that apparently coca leaves were carried only by the Inca himself and by those of his sons on whom the order of knighthood had been conferred. The bag was regarded as an emblem of ennoblement, and was buried with the owner. To-day it is worn by Northern Indians as part of their attire. Several of the leaves, after prolonged soaking in a solution of chloral hydrate, exhibited a venation showing them to be closely allied to commercial Peruvian coca leaves. An analysis resulted in finding in 10 grams of the leaves a residue "quite definitely alkaloidal in character" weighing 0.006 gram. The amount, however, was much too small to allow for tests for ecgonine, and microchemical scrutiny failed to show the presence of cocaine. Such an investigation, however oddly misplaced it may appear in a journal devoted to modern scientific research, is of distinct interest from an archæological point of view. It would have appealed to Sir Thomas Browne, whose "Hydrotaphia, Urne-Buriall" is by some competent judges regarded as the finest expression of his genius.

Ointment Bases

Practical Notes on the Preparation of Medicaments of this Class and their Absorption

By Herbert Skinner, Ph.C.

President of the Pharmaceutical Society of Great Britain, 1927-29

UNGUENTS are one of the oldest methods in the treatment of ailments; yet each new pharmacopœia committee of revision, national or local, sends out inquiries as to whether pharmacists and manufacturers have found the most suitable fats or combination of fats as an ointment basis for the exhibition of neutral or protective medicaments.

The specific bases, which are in many respects a heritage, often become suspect on account of what appears to be a casual failing in some obscure irritant dermatosis, and the hospital pharmacist is asked to experiment with other combinations or modifications to resolve these teasing difficulties which beset the dermatologist. The specific question of absorption of any medicament from a basis depends for its answer on the part the basis plays. Usually, lard or an oleate is the standard to which appeals are made. Penetration of superficial layers of skin is limited by the sebaceous or sweat glands, as the horny epithelium presents an impassible barrier. The older method resolved fatty bases into protective, emollient and absorbent. We regard them as penetrants or protectives, with a third which is a combination of both. The term "emollient" can be applied to any fat miscible with the natural fat of the skin; its range for the soothing effect will vary according to the easy miscibility or solvency by natural means independent of the artificial stimulus provided by saponification. Irritants antagonise any soothing effect of a basis, while an emollient reduces the topical action of a medicament. Oleic acid helps absorption owing to its miscibility with the sebaceous substance, while paraffin retards it owing to its opposing characteristic. Soft paraffin is not the best diluent of wool fat, unless it is desirable to combine a penetrating fat with a greasy protective. Animal oils are satisfactory additions to wool fat, and the modern irradiated oils make fine absorbents. The British Pharmaceutical Codex has an unguentum lanolini oleosum, it being a hydrous wool fat diluted with 10 per cent. of olive oil. In practical experience we have found the following more adaptable for our purposes:—

Tragacanth. pulv. (No. 40) ...	2.5
Glycerin.	20.0
Aq. dest.	100.0
Adipis lanæ hyd.	250.0
Acid. oleic.	30.0

Add the tragacanth to the glycerin and water; stir into a smooth cream, heat to boiling point, and incorporate with the fat previously mixed with the oleic acid. Vegetable oils are good diluents, but coconut oil is regarded as a skin irritant and is suspect on that account; rapeseed oil is good, but the odour only complicates that of wool fat. Where simple application of a fat and not a lotion is desired as a protective of the skin at night time, when the irritants are usually rampant, an oleated oil is very soothing, as no one can apply it excessively, and cleansing next morning is easily accomplished.

Recently it became necessary to pigment the skin with sodium fluorescein and avoid alkalising. The fats responded variously, and showed quite marked differences in pigmentising. The best was wool fat and oleic acid, as in the modified B.P.C. formula mentioned; then came hydrous wool fat and olive oil, next lard, then cold cream, mostly on account of the moisture contained, and last of all paraffin, which failed to stain within the maximum time allowed. It may be that such a method of staining would enable us to gain a clue from a stated weight over a given area to form a table for the comparative absorption value of fatty bases; the medicament would need to be considered separately.

The odour of animal fats, save lard, is against them, quite apart from rancidity. Search for a firm neutral ointment basis for general use has not been productive of uniformity. The following table from "Pharmaceutical Formulas" illustrates the variations:—

	B.P. '14	B.P.C.	D.A.B. VI.	Swan	Franklin		
					A	B	C
Wool fat ..	—	50	10	2	—	—	—
Hard paraffin	27	—	—	2	—	6	8
Soft paraffin	70	—	—	6	85	84	90
Liquid paraffin	—	—	50	—	—	—	—
Ceresin ..	—	—	40	15	15	10	—
White wax..	3	50	—	—	—	—	2

Obviously, the objects were not quite the same. Paraffin wax and soft paraffin can be manipulated quite easily on the large scale, but frequently present difficulties on the small scale. The unguentum cereum of D.A.B. VI has got us out of many difficulties; the formula is:—

Ol. arachis	70
Ceræ flavæ	30

We prefer cera alba, as the odour of yellow wax is too marked.

Specific ointments, such as Scott's dressing, mercury or nitrate of mercury ointment, can scarcely be tampered with in the light of experience, but the dilution of unguentum hydrargyri nitratis might be reconsidered. The unguentum cetacei of the B.P., 1914, was not an improvement on that of 1898 in my opinion, as it converted the whole ointment into a protective one and there were plenty without increasing the number.

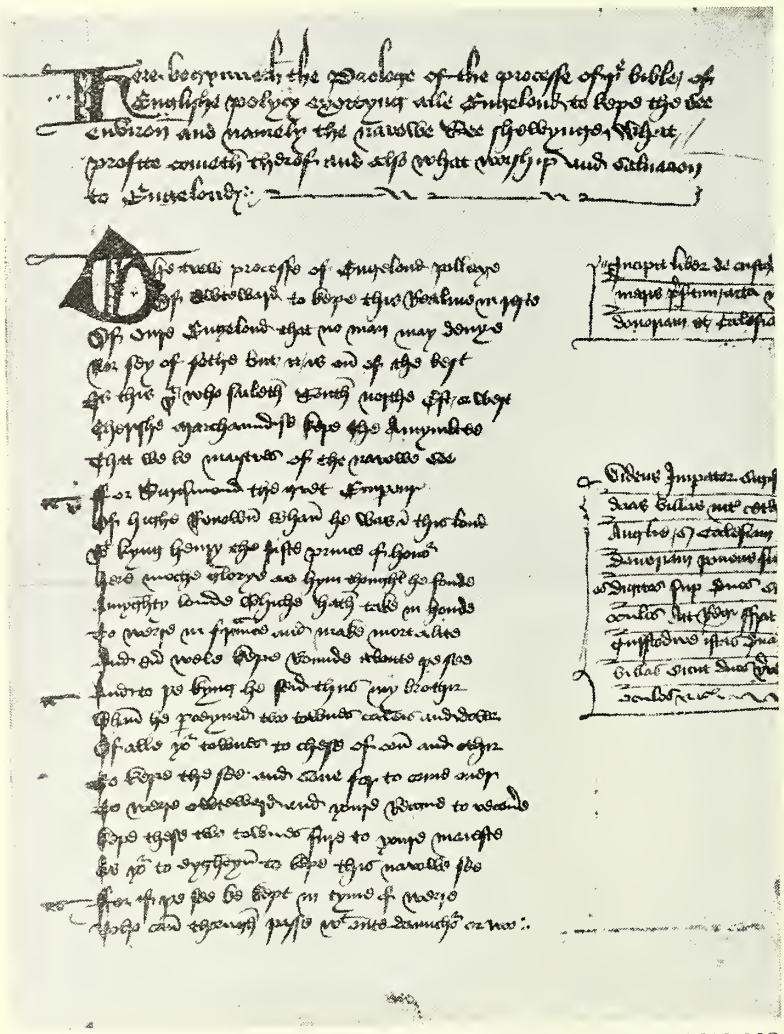
Finally, apart from the specific ointments it would appear that two simple standard ones are necessary: one with the primary function of absorption, the second purely as a protector, while a third might represent a combination of the two principles for the purposes of general use. Lard has never recovered its fame since the war, and in spite of the antiquity of its usage it is receding more and more into the background. Wool fat modified with oleic acid would meet this need of a simple absorption basis; it is quite non-sticky when applied, and fats that are absorbed help in the absorption of medicaments. The unguentum cetacei, B.P., '14, is an excellent protective, but the reverse of '98, as I have pointed out. The combined basis for general use needs about double the amount of wool fat instead of white wax in the present unguentum paraffini, B.P., '14. By such means we have a range of three bases equal to meeting all the needs of the dermatologist in the application of medicaments.

Mediæval Politics and Pharmacy

A Sidelight extracted from "The Libelle of Englyshe Polycye," a Vigorous 15th-Century Polemic in Verse

ABOUT 1436 there appeared a notable work entitled "The Libelle of Englyshe Polycye." In form it was a rhyming pamphlet of a type common in the fifteenth century, but this example is remarkable for the breadth and pungency of its idea. At the time England was undergoing the preliminary stages of the disastrous reaction after the brilliant foreign wars of Henry V. From the text it is obvious that the author was well-informed and highly placed; Sir George Warner, its most authoritative commentator, is of the opinion that he was probably the Clerk of the Council, Adam Moleyns, afterwards Bishop of Chichester. The Duke of Burgundy had just abandoned the English alliance, vitally affecting the English connection with Flanders, then the great international depôt of trade. The author pays especial attention to the weakness of the Navy, the depression of trade and the disordered finances consequent upon the French war. His main aim was to insist upon the importance of sea-power for England, who, with her strategic position, could thereby bring decisive economic pressure to bear upon Flanders and all her sea-borne commerce, observing,

"For the lytell londe of Flaundres is
But a staple to other londes iwys."



FIRST PAGE OF "THE LIBELLE" FROM THE RAWLINSON MS. IN THE BODLEIAN LIBRARY, OXFORD

In addition the author vigorously preached the gospel of national self-sufficiency, and in this connection made some interesting remarks with regard to medicinal preparations. These refer to the trading activities of the Genoese and the Venetians. Of the former he says but little, and practically nothing to their detriment. The Venetians and Florentines he treats very differently. His objection is that our imports from them are essentially a luxury trade.

"All spicerye and other grocers ware. . .
Nifles, trifles, that litell have availed,
And thynges wyth whiche they fetely blere oure eye,
With thynges not endurynge that we bye."

These opprobrious comments he particularly applies to "drugs, materials for recytes of medicines" and maintains point-blank that England should be self-sufficient in this respect.

"For moche of thys chaffare that is wastable
Mighte be forborne for dere and dyssevable;
And that I wene as for infirmittees
In our Engelonde are such comoditees.
Wythowten helpe of any other londe,
Whych ben by wytte and pratticke bothe ifounde;
That all ill humors myght be voyded sure,
Whych that we gadre wyth oure Englysh cure."

Then he embarks upon a list of the Venetian imports which he declares unnecessary did we but pay proper attention to native herbs:—

". . . wee shulde have no nede to skamonye,
Turbit, euforbe, correcte, diagredie,
Rubarbe, sené. . . ."

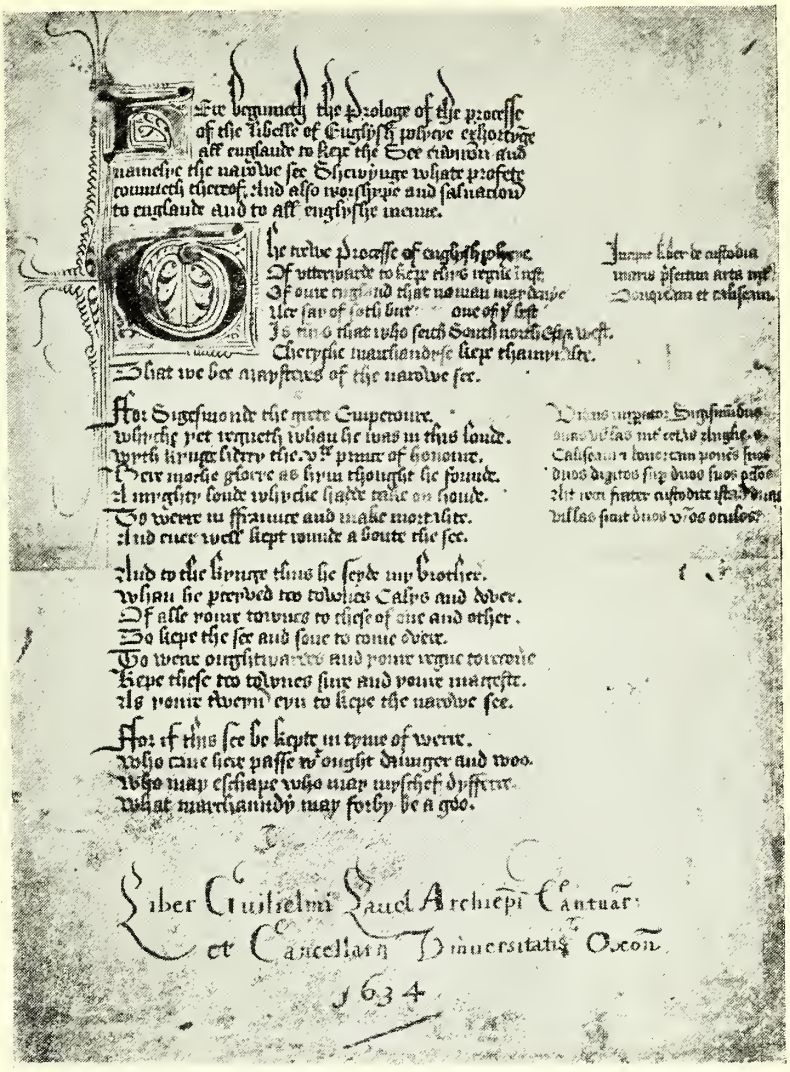
Still harping on the theme of natural self-sufficiency in even pharmaceutical affairs, he retorts:—

"But I knowe wele thynges also spedefull
That growene here as these thynges forseyde.
Lett of this matere no man be dysmayde,
But that a man may voyde infirmitee
Withoute drugges fet fro beyonde the see."

He makes a definite exception in favour of sugar alone. The Calendar of State Papers is eloquent on that. Venice was the chief centre of the trade in sugar, the best of which came from Egypt. In 1319 a single Venetian merchant sold 10,000 lb. of sugar and 1,000 lb. of candy in London.

The Venetians and Florentines

The author proceeds to make bitter comments on the commercial methods of the Venetians and Florentines, who traffic in these medicinal commodities. They are said to take gold out of the country and act as spies—especially for commercial purposes. It appears that they made skilful use of the rates of exchange. Wool is brought in the Cotswolds on credit, sold in Venice for cash, taken to Flanders with the exchange in the vendors' favour, and is loaned at a high rate of interest until the time falls due to pay their English creditors. This sort of usury does not seem particularly extraordinary or heinous to us, but the mediæval point of view was radically different. The practice was ineffectively dealt with in an Act of Parliament in 1437. The author proposed as a remedy that, as abroad, all aliens should be compelled to unload and reload their vessels within forty days. Moreover, they should "go to host" with native merchants specially assigned to supervise all their dealings. An Act of 1425 had failed to enforce this system, but it is significant that a new Act came into force in 1439, three years after the "Libelle" was written. By this legislation every alien merchant had to appear before a mayor or other local authority within three days to have a sworn host assigned to him, "natifs Englois experts en le fail de marchandise." Such a host had to supervise all dealings and report them to the Exchequer, receiving for this duty a fee of twopence in the pound. Moreover, the merchants had to dispose of their wares within eight months and buy English goods with the proceeds, though they could get a licence to export unsold goods without paying duty. This statute was meant to last for eight years, but seems to have been enforced for only six, after which it virtually lapsed. A marginal note refers to "wyls and gyles" which made it inoperative.


Here begynneth the Prologe of the Processe of the Libelle of Englysh polycye exhortynge all englande to kepe the See rowndon and namelye the navye See Shewynge what profyte cometh therof. And also worshype and salvacion to englande and to all englysshe menne.

The olde Processe of englysshepolycye. Of wyttynesede to kepe thise regnes inne. Of oure owne and that nowen mayntayne Ware saf of forth but one of ye best Is ryght that who seeth South north este west. Cheryshe marchandyse kepe thamyralte. That we bee maysteres of the narowe see.

For Sigysmonde the grete Emperoure. whyche yet reygneth vnlaw he lyves in this londe. Wyth kynge Henry the vi^te prince of honoure. Her marche gloreye as hym thought he founde. Al myghty londe vnlyche shalle take an ende. To weere in ffraunce and make mortalite. And euer well kept rounde a boute the see.

And to the kynge thus he sende my brother. Vnlaw he preyed two townes Calys and dover. Of alle youre townes to these of one and other. So kepe the see and sone to come dyner. To weere oure enmyes and youre regne to rewle Kepe these two townes sure and youre marchaundyse. Als youre fadyr eyn to kepe the narowe see.

For yf this see be kepte in tyme of weere. Who cane hem passe wrought dishonor and woo. Who may eschape who may myschef dyffeere. What marchaundy may forby be a goo.

Liber Guilielmi Laud Archiepi Cantuar: et Cancellarii Universitatis Oxon 1634

A MS. OF "THE LIBELLE," WHICH BELONGED TO ARCHBISHOP LAUD

Laud MSS., Bodleian Library

The Importance of this Tract

Such are the pharmaceutical side-lights of a prominent mediæval political tract. The author was essentially a mercantilist in his ideas, stressing material prosperity and sea-power as the bulwarks of national strength. What one might almost call his slogan was the couplet:—

"Cheryshe marchandyse, kepe thamyralte,
That we bee maysteres of the narowe see."

The work has been recognised by many authorities of various periods. Hakluyt included it in his famous collection of "Voyages" with the commendation ". . . . you shall finde so much true and sound policy, so much delightful and pertinent history, so many lively descriptions of the shipping and wares in his time of all nations almost in Christendome, and such a subtile discovery of outlandish merchants fraud and of the sophistication of their wares that needs you must acknowledge that more matter and substance could in no wise be comprised in so little a roome." Seldom quoted it in his "Mare Clausum," an example followed by many economic historians. One extant copy bears the handwriting of the great Elizabethan statesman, William Cecil, Lord Burghley, while another was in the possession of Pepys, who, no doubt, found it of somewhat melancholy interest through his long connection with naval affairs in a rather inglorious period, a period when English credit stood so low that even his vivacious pages bear witness to the prevailing uncertainty.

Mediæval Pharmacopolists

A Short Exposition of Venetian Retail Drug Vending based on Contemporary Iconography

By Dr. Giovanni Carbonelli

Director of the Istituto Nazionale Medico-Farmacologico, Rome.

DOCUMENTS dealing with the retail selling of drugs and medicinal preparations in Venice during the Middle Ages are numerous, but illustrations showing actual scenes of the drug-vendors' activities are a comparative rarity, and are for that reason the more highly prized. However, the medical treatise which bears the title "Tacuinum Sanitatis in Medicina," compiled by Abulcasis, is one of those books which good fortune has protected and preserved through the ages since its advent in Europe in the form of a Latin version done by order of Charles of Anjou at Naples, about the year 1276.

The Maritime Republics

In the Middle Ages commerce in drugs and medicinal plants was in the hands chiefly of the Venetians and the Genoese, the maritime republics of Venice and Genoa supplying practically all Western Europe with what was needed in the way of medicinal preparations and drugs of the Orient. But while the less artistic spirit of the Genoese contented itself with documentation pure and simply of commercial interest for the most part, the Venetian spirit, quicker to appreciate and make manifest art in all its branches, did not simply rest with commercial documentation alone, but supplemented it with scientific treatises, and even went further in ornamenting these with figures and illustrations, thus revealing to posterity the manner of vending simples and compounded preparations.

Vendors of Drugs and their Shops

A study of the illustrations which ornament the treatise reveals the methods adopted in retail buying and selling, and the construction of the shops. It cannot be affirmed that the style of shop is peculiarly Venetian or Lombard, as the form is that of the small shop common to many places in Italy and abroad, and it is simply a shop which is not a pharmacy, that is merely a place for selling substances which may or may not have had medicinal properties, but which were not subject to the regulations of the *Statute degli Speziali*, the statutes affecting the sale of drugs. The figures are from the "Tacuinum Sanitatis"—Codex No. 4,182 of the Biblioteca Casanatense in Rome.

Theriaca

The universal panacea, theriaca, gave to the Venetian pharmacopœia an extensive renown. Its sale is depicted in one shop only. This shop has the counter fixed at the wall and the usual shelves are found against the wall in the background. The scene is interesting enough; the customer, attired in the clothes of the gentleman of the period, is holding a jar containing the remedy in his left hand, while the seller is counting the money on the top of the counter, and, at the same time, holding in one hand a jar identical with the one which has been supplied to the client. A boy is seen filling another of the same form, and is taking the theriaca from a large jar by means of a spatula. One may count altogether in the shop eleven jars of this self-same shape, of white glazed earthenware, and each appears to be of the capacity of one or two doses of the remedy. I say capacity deliberately, because the customary scales are absent from the counter, and this inclines me to the supposition that these jars might have contained the quantity of theriaca which the physicians were accustomed to prescribe by weight.

Medicated Syrup

The shop where syrupus acetosus is on sale shows a more complicated arrangement. On the counter are standing two glass bottles of different capacities, each containing the syrup. On two shelves are pots of more or less cylindrical form and a number of jars with, and without, spouts. In these spouted jars the syrup most certainly would be kept, but as for the round pots it is difficult to say what they may have contained, though probably they would hold confections or similar preparations, rather than liquids. The seller is holding a pair of scales in his right hand, and with his left he hands over to the buyer a glass containing the syrup. I am not of the opinion that the scales have served to weigh the liquid, as on the scale pan there are still two weights. Regarding the drug pots, the majolica is coloured blue, yellow, red, with geometrical patterns and floral designs. It is impossible with any degree of accuracy to state the actual origin of these, but certainly they would come from some manufactory in the district, probably within easy reach of Venice, and were obtained on account of easy carriage and minimum cost. The bottles without doubt came from the Island of Murano.

Dried Figs

In the shop of the seller of dried figs—ficus siccus—very nearly the same equipment is noted as in the other shops. The objects of greater interest are the wicker packing crates, each made up of two parts—lid and container. The dried figs came from Syria, the islands in the Ægean, and Sicily, and consumption was fairly large in view of their slight medicinal value for ailments of the chest and on their reputation as an antidote against poison.

Turkey Merchants

The retail seller of medicinal preparations usually sold the merchandise of the large drug warehouses, which were owned in Venice by those who may be described as Turkey merchants. These small shops were the forerunners of the druggists' and the herbalists', and the transactions included the sale of drugs not compounded according to any phamacopœia. Exception might be made of theriaca, this preparation having assumed the importance of a speciality and exactly as it was sold in cities of the Roman Catholic faith, so was it sold in Turkish and "barbarian" lands, under the seal of the Madonna with an inscription in Arabic or Turkish.

Fichus ficc.



Siropus acetosus.



SELLING MEDICINES IN THIRTEENTH-CENTURY DRUG STORES OF VENICE

These two miniatures are reproduced from the Tacuinum Sanitatis in Medicina

SKETCHES IN THE HISTORY OF ENGLISH MEDICINE

IV. Morning Light: The Seventeenth Century and the Beginnings of the Scientific Method—Harvey, Paré, Sydenham and the Royal Society

By CHARLES SINGER, M.D., D.Litt., F.S.A.

(*Lecturer in the History of Medicine in the University of London*)

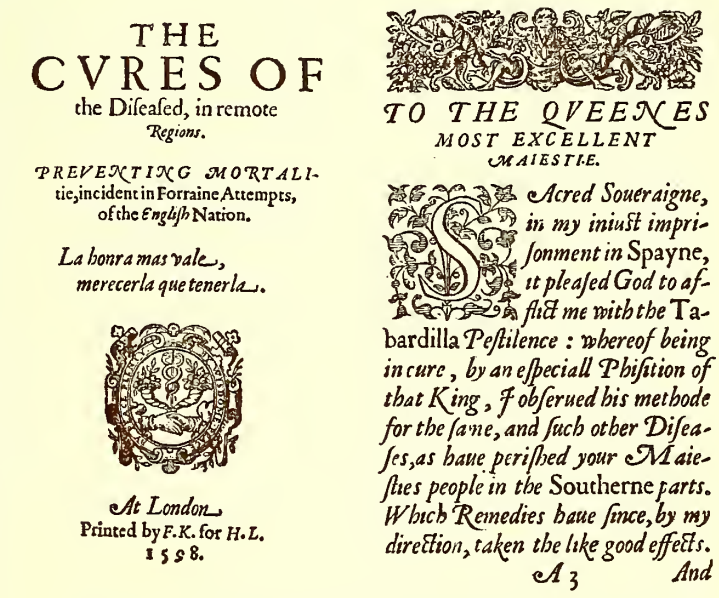
IN the third of this series of short studies (THE CHEMIST AND DRUGGIST, 1929, II, 741) we discussed the medical practice in England in the fifteenth and sixteenth centuries. We have now to deal with the beginning of the true scientific period. The mediæval traditions were fading away, at least in the better educated and more enlightened classes. In Italy and especially at Padua the pupils of Vesalius were carrying on the tradition he had founded. Galileo and his pupils were now at work introducing a new outlook in physical science. In England Francis Bacon, Lord Verulam, was elaborating his great scheme for the advancement of science which bore resemblances to the conception of his great philosophical colleague on the other side of the Channel, the Frenchman, René Descartes. Travel, too, had become a part of the regular education of the upper classes, and the "grand tour" frequently involved a visit to Padua. The more adventurous spirits found an outlet for their energies in overseas expeditions to tropical countries. These were often mere buccaneering exploits, sometimes not far removed from piracy. In the meanwhile more legitimate trading, both to the Western continent and its islands and to the Eastern Indies, was advancing apace.

With all this interest in oversea attempts, attention was bound to turn to the professional needs of sailors, and a considerable literature intended for the use of seamen rapidly arose. Among these works it is not surprising to find a book on medicine adapted to the especial circumstances of the sailor's life. New and strange lands yielded diseases equally new and strange, and we may look to this period for the small beginnings of the study of tropical medicine in this country.

Richard Hakluyt, in the dedication to Sir Robert Cecil of "The Third and Last Volume of the Voyages Navigations Traffiques and Discoveries of the English Nation," published in the year 1600, wrote as follows :—

"I was once minded to have added to the end of these my labours a short treatise, which I have lying by me in writing, touching *The curing of hot diseases incident to traveilers in long and Southerne voyages*, which treatise was written in English, no doubt of a very honest mind, by one M. George Wateson, and dedicated unto her sacred Maiestie. But being careful to do nothing herein rashly, I shewed it to my worshipfull friend Mr. Doctor Gilbert, a gentleman no less excellent in the chiefest secrets of the Mathematicks (as that rare jewel lately set foorth by him in Latine doth evidently declare) than in his own profession of physicke : who assured me, after hee had perused the said treatise, that it was very defective and imperfect, and that if hee might have leisure, which that argument would require, he would either write something thereof more advisedly himselfe, or would conferre with the whole Colledge of the Physicions, and set downe some order by common consent for the preservation of her Maiestie's subjects."

The Gilbert whose just criticism Hakluyt quotes, was William Gilbert (1540-1603), Physician to Queen Elizabeth and again for the last few weeks of his life to King James I. Gilbert, who by reason of his work on the magnet, "that rare jewel lately set foorth by him in Latine" ("De Magnete," London, 1600), will always be regarded as among the greatest as he was certainly one of the most interesting of British men of science, became president of the Royal College of Physicians in the very year (1600) in



THE CVRES OF the Diſeaſed, in remote *Regions*.

PREVENTING MORTALI-tie, incident in Forraine Attempts, of the *Engliſh* Nation.

La honra mas vale, merecerla que tenerla.

At London Printed by F.K. for H.L. 1598.

TO THE QVEENES MOST EXCELLENT MAIESTIE.

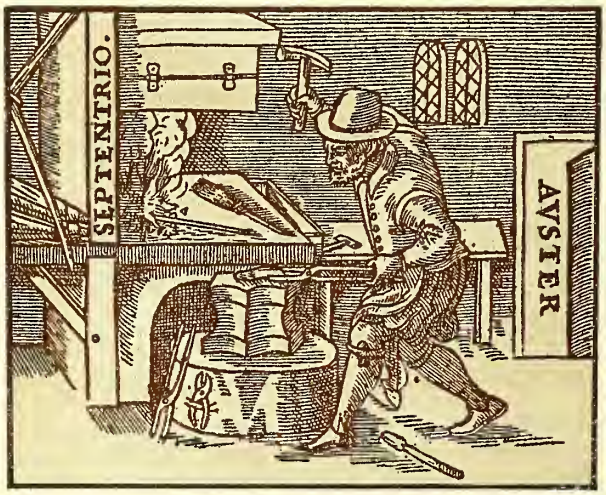
Acred Soueraigne, in my iniuſt impriſonment in Spayne, *it pleaſed God to afflict me with the* Tabardilla *Peſtilence : whereof being in cure, by an eſpeciall Phiſition of that King, I obſerued his methode for the ſame, and ſuch other Diſeaſes, as haue periſhed your Maieſties people in the* Southerne *parts. Which Remedies haue ſince, by my direction, taken the like good effects.*

A 3 *And*

THE FIRST BEGINNINGS OF TROPICAL MEDICINE

The voyages and discoveries of the seventeenth century brought the Englishman into contact with new diseases. This small book by George Wateson, of which only three copies are known to exist, came to the notice of Richard Hakluyt, and William Gilbert, Elizabeth's great physician.

Collection of Dr. Charles Singer.



WOODCUT FROM GILBERT'S "DE MAGNETE"

This figure illustrates Gilbert's experiment which showed that a red hot iron placed in line with north and south becomes magnetic when struck by a hammer. Gilbert was president of the Royal College of Physicians.

which Hakluyt's volume was published. His scheme for a work by the College of Physicians on the diseases of seamen was never fulfilled, and the project of Hakluyt and Gilbert for the systematic study of this subject was deferred to the end of the nineteenth century.

The little pamphlet of Wateson introduces the subject of tropical diseases, of which it describes a few. We may quote his account of one, the interesting calenture :

"The Calenture (or Burning Fever) called by the Spaniards, La Calentura, is the most usuall Disease, happening to our Nation in intemperate Climats, by inflammation of blood, and often proceeding of immoderate drinking of wine, and eating of Pleasant Fruits, which are such nourishers thereof, as they prevent the convenient meanes, that are used in curing the same.

"The Calenture at the first apprehension afflicts the Pacient with great paine in the head, and heate in the bodie; which is continuall or increasing, and doth not diminish and augment as other Fevers doo : and is an introduction to the Tabardilla, or Pestilence; whereof next is intreated : but then the bodie will seeme very yellow."

By the calenture is meant the condition now classed as "heat-stroke" or "sunstroke." The word, which in Spanish meant simply a "heat" or "fever," was introduced into England from Spain about 1590. The calenture was considered to be especially a disease of sailors in the tropics, and by the popular fancy it was associated with a delirium in which the patient imagined the sea to be a green field and desired to jump into it. Stories are even told of the disease having seized upon entire crews. Those bitten by the tarantula were supposed to be similarly affected by a desire to jump into the sea, as were also, at times, the St. Vitus' dancers of the Middle Ages. Such a mad sea fever attacking a crew is attributed to the pranks of Ariel in "The Tempest" (Act I, sc. ii).

The book of Wateson, which is extremely rare (only three copies are known, of which one is in the writer's possession), is adorned with verses of true Elizabethan flavour. Among these we may quote those with which it terminates :—

"Let no man boast of beautie, strength, or youth :
For like to flowres we bud, we spread, we fade :
Nothing is certaine, but the certaine truth,
To day a man, to morrow but a shade.
His last apparell, cut out with a spade,
Of Natures coursest stuffe (I meane) her molde,
Must shrowd the corps, that living shone in golde."

A good reflex of the pharmaceutical practice of the day is obtained from the no less rare English translation of "The Charitable Physitian With the Charitable Apothecary" of Philbert Guybert which was published in London

THE
CHARITABLE
PHYSITIAN
With the
CHARITABLE
APOTHECARY.

Written in French by *Philbert Guibert* Esquire, and Physitian Regent in *Paris*: and by him after many severall Editions, reviewed, corrected, amended, and augmented.

And now faithfully translated into English, for the benefit of this Kingdome, By I. W.

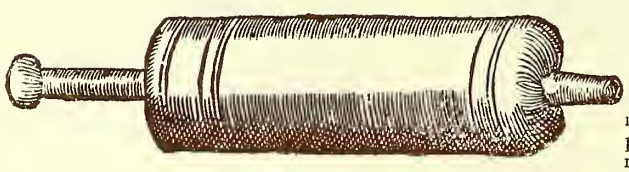
LONDON,
Printed by *Thomas Harper*, and are to bee sold by *Lawrence Chapman* at his shop at *Chancery* lane end, next *Holborne*, 1639.

PHARMACEUTICAL TEXT-BOOK OF 1639

Adapted from the original text of Guybert, a famous physician of Paris, this little treatise is very rare, only three copies being recorded, although the French text is quite common. It gives detailed instructions as to the obtaining of drugs and their prices, but insists that remedies against "all sorts of diseases are easily made by anybody."

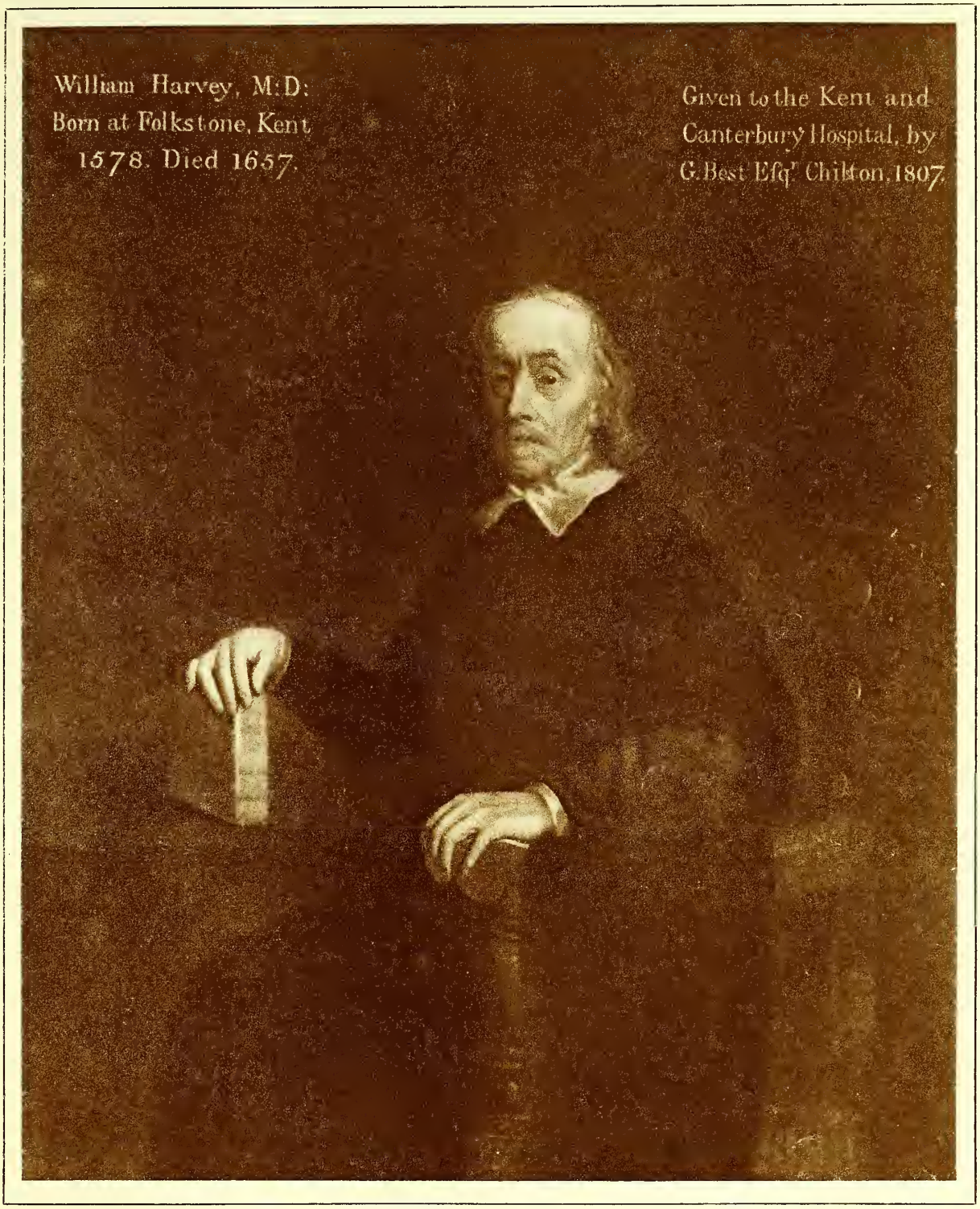
in 1639. Guybert was a very famous contemporary Paris physician. The translator adapts the book to English readers. Evidently he has no high opinion of the difficulty of the apothecary's art. In his preface he tells us :—

"I have written familiarly in this little Book, the manner to make and prepare in the house these remedies, which are practised daily by the best and faithfullest Physitians against all sorts of diseases, the which you may easily make your selfe, or if you will not take the paines, you may



A CLYSTER, A SEVENTEENTH-CENTURY ENEMA SYRINGE

The translator of the "Charitable Physitian" gives humorously strict injunctions concerning "the lending of a clyster to strangers."
From Sir Richard Wiseman, "Eight Chirurgical Treatises."



THE GREATEST OF ALL DISCOVERERS IN THE HISTORY OF MEDICINE

This portrait of William Harvey, while being less hackneyed than the painting by Cornelius Jansen, is authentic and undoubtedly characteristic. It has been in the possession of the Kent and Canterbury Hospital since 1807. Harvey was born at Folkestone, 1578.

Reproduced by courtesy of the Board of Management, the Kent and Canterbury Hospital.



HARVEY'S GREAT WORK

Published in 1628, this extremely important work was issued most unhandsomely, badly printed on bad paper by an insignificant publisher of Frankfurt.

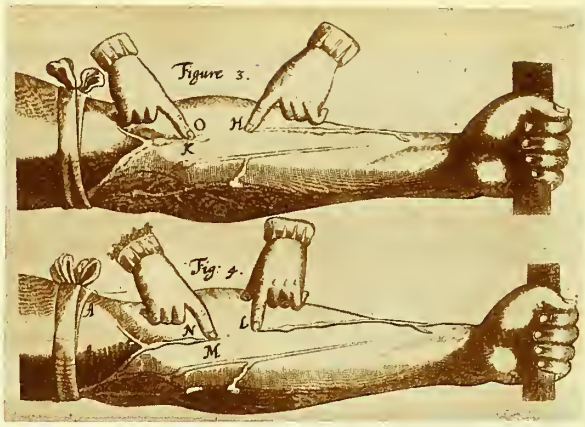
British Museum.

cause them to bee made by your servants as they are practised daily in divers good houses in the City of Paris and London, or otherwise, if you find any difficulty in the preparation of those things, your ordinary Physitian or any sufficient Doctor in the faculty of Physicke will shew and enlighten you, and in lesse than two houres, you will learne to make all these remedies, and all others hereunto belonging.

"You shall buy your Drogues or Medicaments at the Droguists, being chosen by the said Physitian; and your Roots, Hearbes, Seeds, Flowers, etc., at the Herborists or hearbe women in Cheap-side, and those which live in the country, the Physitians of that place will give them acknowledgment of the said simples, and for the medicaments compounded, hee will certifie you where you shall have them reasonable and faithfully composed."

The book is particularly interesting as giving the prices of drugs and of "all the instruments necessary to furnish an apothecary." It gives him much homely advice of which the following "Charitable and notable advertisement" is not the worst :—

"It is necessary for all sorts of people to keepe by them a syringe or bladder, and pipe to give Clysters, and to make or cause to bee made the said Clysters in their houses; for what disease soever hapneth or ariveth there, is nothing so proper at the first as a Clyster; but if your servant or any other unto you belonging, should give a Clyster to any one sicke of the Plague, Poxe, Measells, Purples, Dissentry, Small Poxe, Ulcers, Sores, Boyles, or any other pestiferous disease; or should lend it to any that should doe the like, and come and give you a Clyster with the same pipe without washing and cleansing, any of the said diseases would be upon you in lesse than an houre



HARVEY'S EXPERIMENT ON THE CIRCULATION

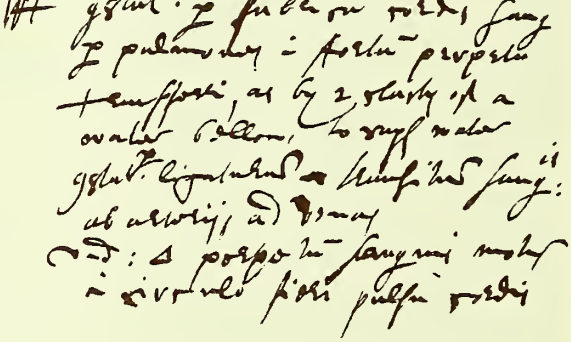
Taken from the "De Motu Cordis." This engraving illustrates the fact that in the veins the motion of the blood is always towards and never away from the heart. It also shows the "nodes" which mark the valves in the veins.

British Museum.

after, and to all your family; therefore see the pipe well warmed, washed and cleansed, before you take the said Clyster, and lend your pipe to none but to those that you know very well."

According to Guybert the doctor's duties do not end with death, for he has a large and elaborate section "shewing the manner to Embalme a dead Corps."

By far the most important scientific work of the century was that of the Englishman, William Harvey (1578-1657). His name is for ever associated with the fact that the blood circulates, and that it is the same blood that is propelled



THE FIRST REFERENCE TO THE CIRCULATION OF THE BLOOD

Lines from autograph lecture notes of William Harvey, written in 1615 and containing the first reference to the circulation. Transcription :—

WH constat per fabricam cordis sanguinem
per pulmones in Aortam perpetuo
transferri, as by two clacks of a
water bellows to rayse water
constat per ligaturam transitum sanguinis
ab arteris ad venas
unde △ perpetuum sanguinis motum
in circulo fieri pulsu cordis.

Translation : On account of the structure of the heart William Harvey holds that the blood is constantly passed through the lungs into the aorta, as by two clacks of a water bellows to raise water. Moreover, on account of the action of a bandage on the vessels of the arm he holds that there is a transit of blood from the arteries to the veins. It is thus demonstrated that a perpetual motion of the blood in a circle is caused by the heart beat.

Explanation of Terms : A clack is a valve, and a water bellows is a pump. △ is Harvey's shorthand sign for "it is demonstrated," and his abbreviated initial WH is used to indicate his own views or observations. The clacks or valves refer to the valves in the aorta and pulmonary artery.



WHERE WILLIAM HARVEY PURSUED HIS STUDIES: CLOISTER AND COURT AT PADUA UNIVERSITY

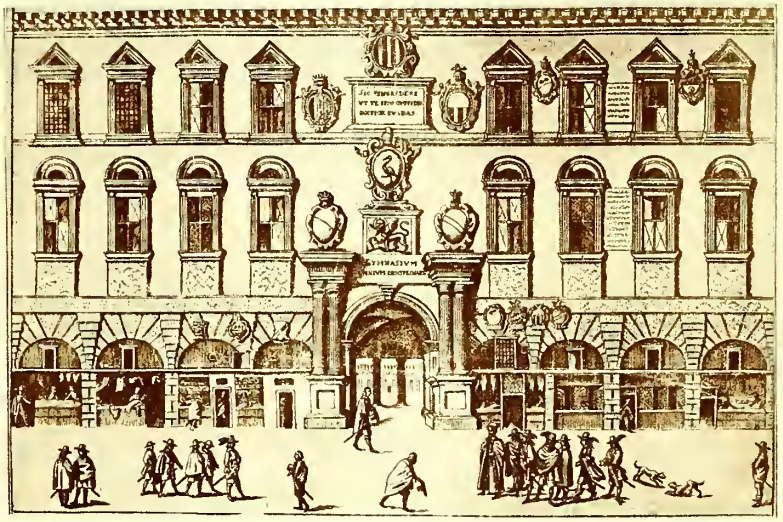
From an old engraving given in "Settimo Centenario della Università di Padova."

over and over again by the heart through the blood vessels. We do not know exactly when Harvey reached this point of view, but we do know that he was teaching it in his lectures at the Royal College of Physicians in London at least as early as 1615. Twelve years later this most significant discovery was given to the world. Its modest and reticent author sent it forth in a very small quarto volume, abominably and inaccurately printed on wretched paper by a Frankfurt typesetter. This "Exercitatio anatomica de motu cordis et sanguinis in animalibus," bears the date 1628.

When Harvey was a youth the nature and the significance of the movements of the heart were among the most discussed of problems. The view still generally accepted at that time as to the action of the heart had been set forth fourteen centuries previously. The current theory was still that of Galen (A.D. 130-200), which we discussed in our issue of December 21, 1929, already referred to. By the end of the sixteenth century it had become evident that there were many objections to Galen's theory of the action of the heart. Nevertheless, the current teaching of physiology remained Galenic, for the simple reason that there was nothing to put in its place.

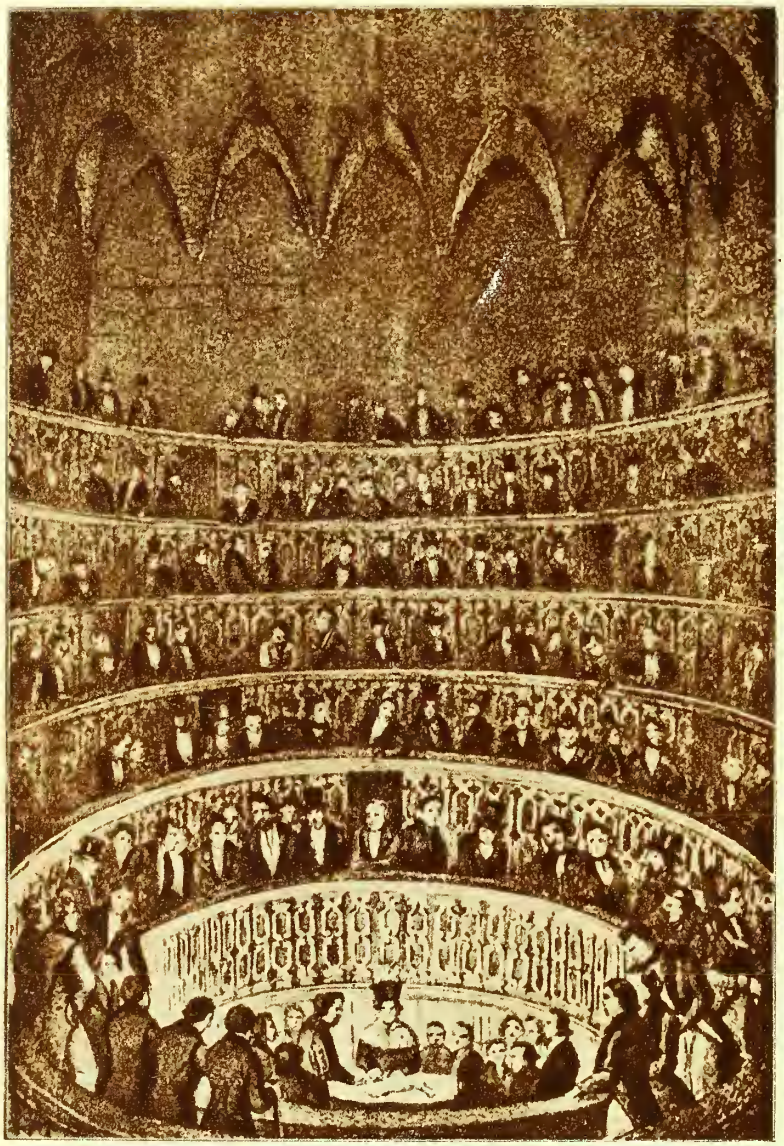
At that time by far the best medical school in Europe was that at Padua. The University of Padua was within Venetian territory, and the Republic of Venice permitted a freedom that was not enjoyed elsewhere. Students of any religion and of no religion, men of all nations and of every social status, were alike welcome provided only that it was learning which they sought. Thus Padua had become a most important international centre, the cynosure of the freer and more fervent spirits of the age. A series of very great teachers had established its reputation and was drawing the ablest young men and even young women to its lecture halls. It was natural in 1599 that Harvey, still an ardent youth, should bend his steps to Padua. The great Italian University was to become, in the truest sense, his spiritual home.

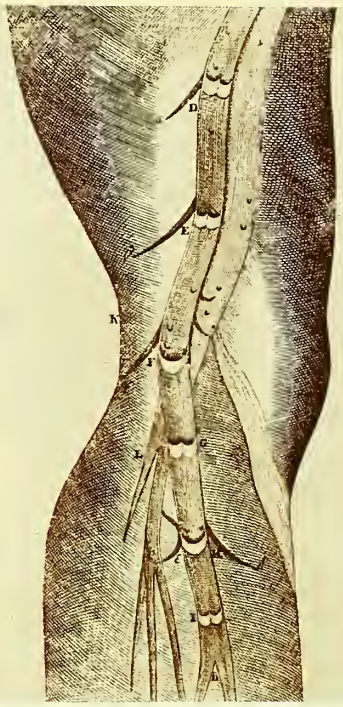
At that time the most successful teacher at Padua was one Hieronymo Fabrizio (1537-1619), usually known as Fabricius of Aquapendente. This Fabrizio was a very learned man and a most able observer. He, more than any



THE FRONT OF PADUA UNIVERSITY BUILDINGS

Dated about 1600, this engraving shows the University with groups of students in front of it. The ground floor in front is occupied by shops. In the rooms that surround the inner quadrangle was given the most important biological teaching of the sixteenth and seventeenth centuries. It is almost unaltered to-day.







HARVEY'S GREAT TEACHER

The engraving above shows a lecture in the anatomical theatre, built in 1590 by Fabricius, at Padua. Here Harvey pursued the studies that led to his great discovery. The theatre still exists almost intact. On the right, above, is an engraving from the works of Fabricius ("Opera Omnia Anatomica") showing the valves in the principal vein of the leg. It was Fabricius who turned Harvey's attention to this study of the blood vessels. The portrait on the right, below, is taken from the frontispiece to his works.

other, was the founder of the modern science of embryology, a subject to which Harvey devoted the later part of his life. Fabrizio made a great many important scientific advances. He was, moreover, a most attractive teacher. It was natural that Harvey should gravitate to him, and it was natural, too, that Fabrizio should turn Harvey's energies in the direction of the study of the blood vessels. The older man had himself given special attention to this subject, and wrote a finely illustrated book on the valves of the veins. He described these structures well and impressively, and though he failed to realise the nature of their action, he showed that their mouths point always towards the heart. We now know, and Harvey came duly to realise, that this implies that in the veins blood is obstructed from any movement except toward the heart.

Harvey's time at Padua was passed while Fabrizio was at the height of his powers, and he returned to England in 1602 full of the stimulus of his great teacher. During the years that followed he was dissecting and experimenting very industriously, and by 1615 at latest he had reached a clear conception of the circulation. To discuss the steps by which Harvey arrived at this great conclusion would be little appropriate in this place. He had been well trained by Fabrizio in experimenting on living animals, he was exceedingly industrious, he was widely read in anatomical literature, he was of a contemplative turn of mind. He combined a quiet and cautious temper with experimental enthusiasm and a genius for interpreting the results of experiment. His was, in fine, a superb mental equipment for a life of scientific investigation.

While we can here discuss neither the nature of the circulation nor the steps by which it was demonstrated, it is yet not inappropriate to consider the final argument

in favour of the circulation of the blood with which Harvey convinced his critics.

Harvey, early in his work, reached two fundamental conceptions concerning the system of blood vessels. He perceived that the valves in the veins would permit the blood to pass only toward the heart, while those at the root of the great arteries arising from the heart would permit the blood to pass only away from the heart. Now Harvey's crucial point is that the movement of the blood must be *always in one direction*, and, moreover, on account of the continued beat of the heart, also *continuous*. This really clinches the matter; for consider the capacity of the heart. Let us suppose that either ventricle holds but 2 ounces of blood. The pulse beats 72 times a minute, and 72 × 60 times an hour. In the course of one hour, therefore, the left ventricle will throw into the aorta, or the right ventricle into the pulmonary artery, no less than 72 × 60 × 2 = 8,640 ounces = 38 stone 8 lb. of blood. In other words, in one hour the ventricle will throw into the great artery more than three times the body weight of a heavy man. Whence can all this blood come? Whither can it all go? It cannot come from the ingested food and drink, for no one could consume so much in one hour. It cannot reach and remain in the tissues, for they would soon all burst and ooze with blood! The solution of the puzzle, Harvey came to see, is that it is the same blood that is always being pumped into the arteries, and the same blood that is always coming back through the veins. In other words, the blood *circulates*. Beyond question Harvey set the lead to anatomical and physiological research in this country.

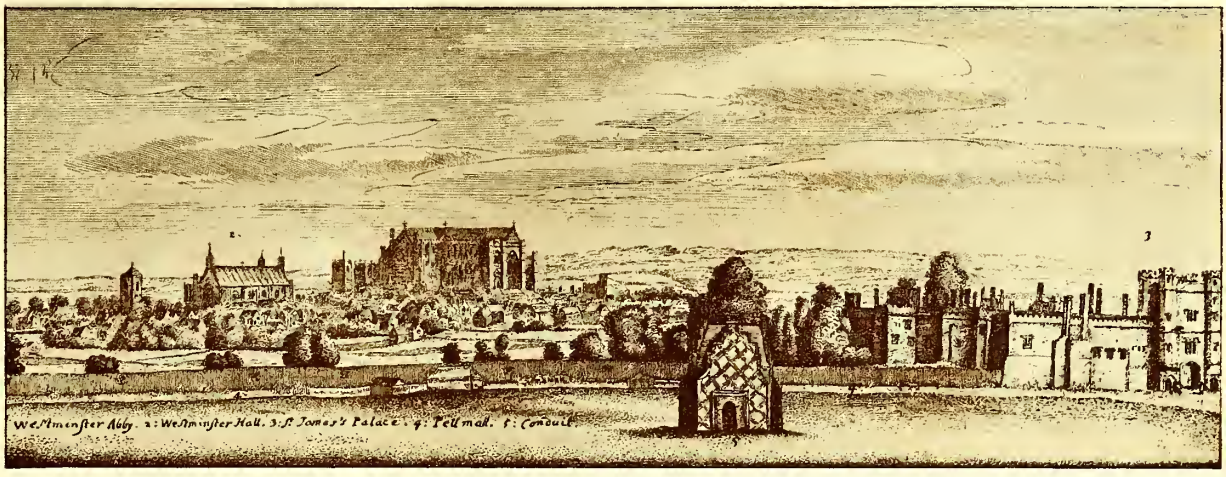


FIRST GREAT ENGLISH CLINICIAN

This portrait of Thomas Sydenham, M.D., 1624-1689, is from an engraving after a painting at All Souls' College, Oxford.

A branch of scientific knowledge in which the actual advances are but little susceptible of formal expression is the study of clinical medicine. That subject is expressed as a tradition, and it is difficult to trace its progress in formal memoirs. The foremost English exponent of clinical medicine was unquestionably Sydenham.

Thomas Sydenham was born in 1624 at Wynford Eagle, in Dorset. He came of a well-to-do family of strongly Puritan sympathies, and most of his brothers fell on the Parliamentary side in the wars of the Great Rebellion.



WHERE SYDENHAM PRACTISED AS A PHYSICIAN: WESTMINSTER IN THE MIDDLE OF THE SEVENTEENTH CENTURY

This etching after a drawing by the great Bohemian artist, Wenceslaus Hollar, made in 1660, is entitled "St. James's Palace and part of the City of Westminster." The view is about two hundred yards west of Sydenham's house in Pall Mall. "Pell Mell" is the country road in front of the Park wall. The water conduit in the foreground stood nearly on the site of St. James's Square. In 1656, Sydenham started as a general medical practitioner and in 1659 left London to study at Montpellier.

From John D. Comrie, "Sydenham," by courtesy of the author

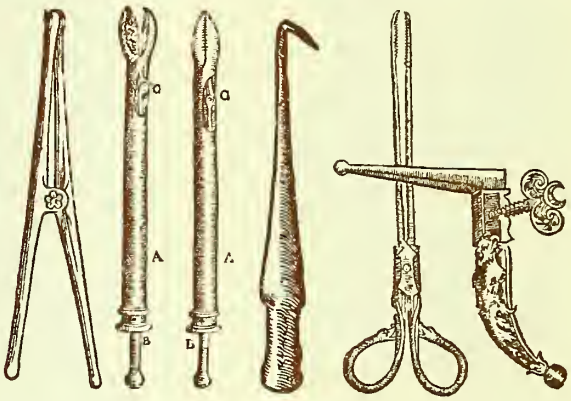


GREAT FRENCH SURGEON, AMBROISE PARÉ
From his "Anatomie Universelle," Paris, 1651.

The physician himself served for four years as a combatant in the Parliamentary forces, and afterwards resided for nine years at Oxford, taking a medical degree and enjoying a Fellowship. There is no evidence that Sydenham developed any scientific interest during this period. In 1656, at the age of thirty-two, he married, gave up his Fellowship, came to London, and started practice in Westminster. In 1659 he seems to have left his practice for a while to study at Montpellier, and his serious scientific work probably dates from that year.

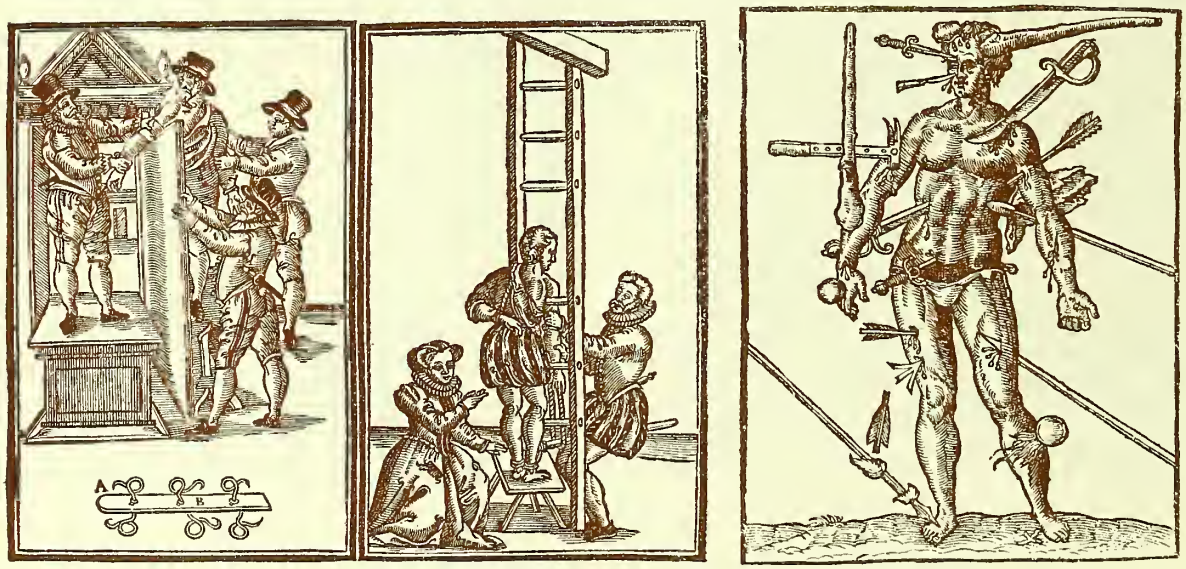
In 1663 Thomas Sydenham was admitted as a Licentiate of the Royal College of Physicians, and in 1666, being then forty-two years of age, he published his first work, "Methodus curandi Febres," dedicated to his friend Robert Boyle, "the father of chemistry." It opens with the almost Hippocratic phrase, "A disease, in my opinion, how prejudicial so ever its causes may be to the body, is no more than a vigorous effort of Nature to throw off the morbific matter and thus recover the patient." We have here the "vis medicatrix naturæ" of Hippocrates, which had been obscured and overlaid in the twenty centuries which lay between the two great physicians. The works from the pen of Sydenham may reasonably be regarded as a commentary on this theme. His books are neither numerous nor long; it was "a day of small books." The great work of Harvey is compressed into fifty-two pages, that of Sydenham into not much more. It is appropriate then that these men should be commemorated in small, thoughtful, well-knit books.

It is difficult to express in simple language the true greatness of Sydenham. We may perhaps put it thus.



SOME OF PARÉ'S SURGICAL INSTRUMENTS
Taken from the translation by Thomas Johnson (the famous apothecary who edited and enlarged Gerard's "Herbal") of "The Works of Ambrose Parey." The engraving shows, from left to right: a dilator, two bullet catchers, a hook, fine forceps, another dilator, and, last, grooved forceps.

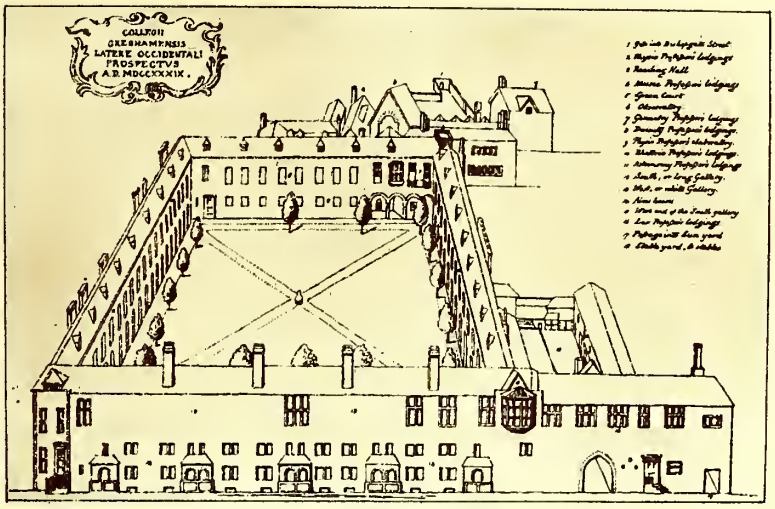
Medical science has been reared on the foundations of anatomy, physiology and pharmacy. But a knowledge of these subjects will not make a man a scientific physician. Both Vesalius and Harvey lived and died without greatly altering the current medical practice of their own age, though they have profoundly influenced that of ours. The object which presents itself to a physician is neither a living



SURGERY IN THE FIELD IN THE SEVENTEENTH CENTURY
Taken from Johnson's translation of Paré, this engraving shows, left, methods of reducing dislocation and, right, a variety of wounds which a soldier in the field might then experience.

anatomy nor a physiological model. It is in fact, a sick and suffering patient. The physician's first task is to examine exactly the phenomena of sickness and suffering, and in doing this the first demand on his knowledge will be the course and history of others who have endured like sickness and suffering. When he has ranged these instances in his mind he may turn, for explanation and for relief, to the resources yielded by other sciences, notably anatomy and physiology. But all the anatomy and physiology in the world will not aid the practitioner who is unacquainted with the natural history of disease. This is the truth that was firmly seized by Thomas Sydenham. The natural history of disease was a subject which he pursued with lifelong devotion, with unflinching and almost fanatic zeal.

Before his time the phenomena of disease had been classified, subdivided, discussed and treated with all the subtlety and skill of scholastic thought. Before his time men had now and again shaken themselves free from the shackles of the mediæval system and had here and there corrected the views of Galen or amplified the limited achievements of their predecessors. Yet none before Sydenham had set himself to consider all the actual cases of disease that lay before him as a subject of scientific description and analysis. That was the great achievement of the English Hippocrates. We should not find it easy to point to any actual discovery to associate with his name, but he did more than discover. He initiated a new mode of approach. He was the founder of modern clinical medicine.



WHERE THE ROYAL SOCIETY MET

From 1622 to 1673 the Royal Society held its meetings at the old Gresham House in Bishopsgate Street. It afterwards became Gresham College. The building seen in this print by Vertue was pulled down in 1768.



AN ALLEGORY OF THE ROYAL SOCIETY

Allegorical engraving by Hollar, representing the foundation of the Royal Society. Fame crowns the bust of Charles II, "Royal Author and Patron." On the right sits Francis Bacon "Artium Instaurator," on the left Lord Brouncker, the first president. Scientific instruments and books surround the group. Among the instruments is Boyle's air pump. *From Bishop Sprat's "History of the Royal Society."*

The advance in medicine was followed by advances in surgery, though England produced no surgeon of the first rank during the seventeenth century. The greatest operator of the preceding age had been the Frenchman, Ambroise Paré. His three great definite contributions to the surgical art were his discovery that gunshot wounds were not "poisonous" and therefore do not require the application of boiling oil but are best healed by soothing applications; secondly, the cognate doctrine that hæmorrhage after amputations should be arrested not by the terrible method of the cautery, but by simple ligature; and thirdly, his advocacy of the method known as "podalic version" of the infant before delivery in cases of abnormal presentation. During the seventeenth century the methods and works of Paré became available to English surgeons. In 1631 Helkiah Crooke published "An Explanation of the Fashion and Use of three and fifty instruments of Chirurgery gathered out of Ambrose Pareus, the famous French Chirurgeon, and done into English for the behoofe of young practitioners in chirurgery." Crooke published also in English an anatomical work from the same source.

A good representative apothecary of the century was Thomas Johnson (died 1644). He was born at Selby in Yorkshire, but set up as an apothecary in the City of London, where he had a physic garden on Snow Hill. He was an ardent member of the recently

founded Apothecary's Company, and in that capacity he used to lead "herborising" excursions in the neighbourhood. His description of the results of one such excursion forms the first local catalogue of plants published in England, "Iter plantarum investigationis ergo susceptum a decem sociis in agrum Cantianum," London, 1629, while an appendix to the volume gives "Ericetum Hamstedianum seu plantarum ibi crescentium observatio habita."

The botanical finds of a tour to Oxford, Bath, Bristol, and the Isle of Wight he published in 1634, as "Mercurius Botanicus, sive plantarum gratia suscepti itineris," while in 1641 appeared "Mercurii Botanici pars altera," based on a visit to Wales. But the great work which brought fame to Johnson was "The Herbal . . . gathered by John Gerarde . . . very much enlarged and amended by Thomas Johnson, citizen and apothecary of London," (THE CHEMIST AND DRUGGIST,' 1923, I, 922). It is said that he added no fewer than 800 new species to the work of Gerard published thirty-six years earlier.

The Civil War called Johnson from his peaceful avocations. An ardent Royalist, he rose to high combatant rank in the King's army. His interest in surgery had already been awakened, for in 1634 he had published in London "The Works of that famous Chirurgion Ambrose Parey, translated out of Latine and compared with the French." The University of Oxford, partial to those of Royalist sympathies, created Johnson M.B. in 1642 and M.D. in 1643. But in the following year, while taking a gallant part in the defence of Basing Castle in Hampshire, he was wounded in the shoulder and died within a fortnight. Johnson's great services are no doubt his contributions to botany and his introduction to England of the complete works of Ambroise Paré.

Until the middle of the seventeenth century chemical knowledge had remained peculiarly backward, and was still a jumble of absurd superstitions. Many advances, it is true, had been made in technical processes; but investigations designed to throw light on theory were mostly prosecuted by the band of dupes and charlatans, who, since the Middle Ages, had been seeking the Philosopher's Stone. The old theory of the four elements, earth, air, fire and water, formed an ill basis for experiment. Some philosophers, it is true, had put forward crude atomic theories, but they had little experimental evidence to adduce. Nevertheless even the alchemists had made some advance and had, for instance, perfected a system of weighing.

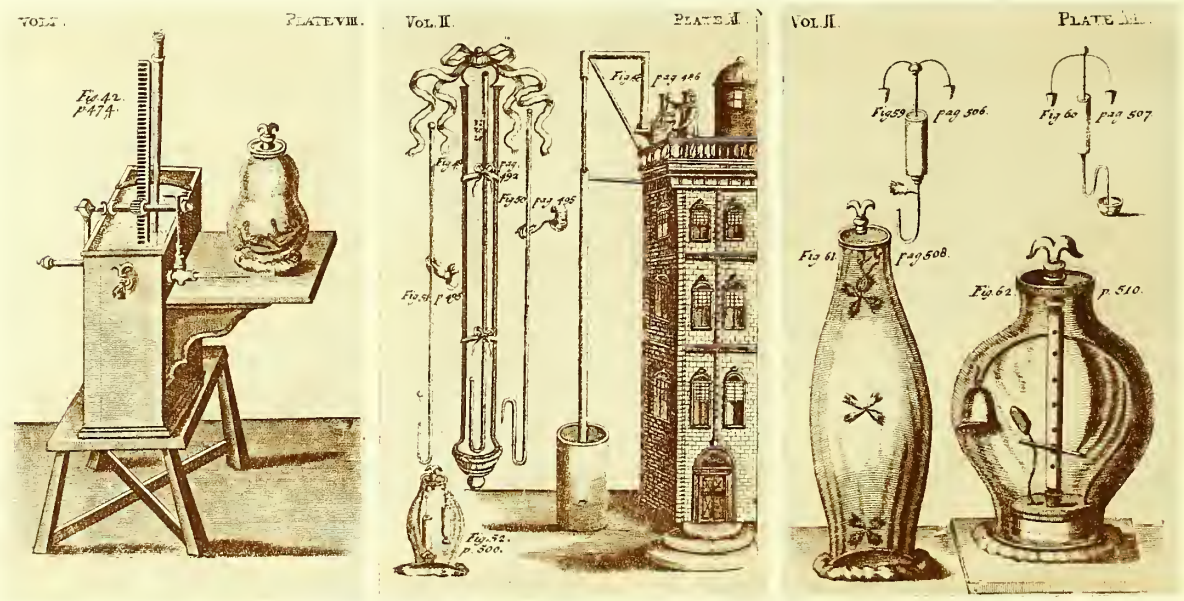
The great defect of the ancient view of matter was that it contained no definite conception of the nature of a *pure* substance. Metals, for instance, were regarded, like other substances, as a mixture in certain proportions of the four elements of Aristotle. Thus, the transmutation of one metal or one substance into another by distillation did not seem an absurdity, or even a task of theoretical difficulty.

The main agent in changing the chemical outlook was Robert Boyle (1627-91) He was a member of a small association of scientific men, the Invisible College, which met first at Gresham College in London, then in Oxford, and finally in 1663 was incorporated by royal charter as the Royal Society. These men were satisfied that the only way to learn anything effective about Nature was by observation and experiment. From their discussions all purely speculative views were excluded. They agreed to meet together solely to compare experiences, to demonstrate experiments, and to draw immediate deductions.

The actual chemical and physical discoveries of Boyle were very numerous, but his great achievement, the real service he rendered to learning in general and to medicine in particular, was his introduction of a new spirit into chemistry. Under him that study was no longer prosecuted for purely practical ends; it was set free from the mystic factor in alchemy and it was loosed from the chains which bound it to medicine, to the disadvantage of both.

Boyle demonstrated that the air is a material substance and has weight. By means of his air pump, he proved clearly that this substance is necessary for the support of respiration. The law of the compressibility of gases is still known by his name. Most important of all Boyle's contributions to chemical theory was his adumbration of the conception of a chemical element in our modern sense, and his view of the atomic structure of matter.

Under the inspiration of Boyle and his colleagues, chemical works of the second half of the seventeenth century exhibit in general a positive, cautious, experimental spirit, and show a great contrast to the mystical and obscure writings of the first half of the century, which have much affinity with alchemy. A fine exponent of this new spirit was John Mayow (1645-79), who was prevented by an early death from fulfilling all his promise. He was the first to recognise clearly that there is a substance or principle in air which is concerned at once with combustion, respiration, and the conversion of venous into arterial blood. In this sense he was the discoverer of oxygen.



SOME EXPERIMENTS OF ROBERT BOYLE, "THE FATHER OF CHEMISTRY AND THE BROTHER OF THE EARL OF CORK"

One of the most original, and at the same time, genuinely scientific spirits in the foundation days of the Royal Society, Boyle did more than any other man to replace alchemy by chemistry. These engravings from the 1725 edition of his Philosophical Works show, left, the use of his air pump to prove the necessity of air to animal life; centre, details of his barometer; and, right, the non-transmission of sound through a vacuum, together with the fact that in a vacuum feathers fall at the same rate as weighty objects.



"SWALLOWING A PILL": AN OLD CARTOON

This amusing coloured aquatint, dated January 8, 1827, somewhat in the style of Rowlandson and Gilray, who had many competitors and imitators, might almost have played a part in the trade advertising of its day. It is by M. Egerton, an artist who flourished in the early nineteenth century. He is also known by two publications issued in 1825—"Airy Nothings," a book of sketches in colour, with descriptive text, setting forth the humours of travel and other features of daily life; and a collection of sketches made during a trip to the Netherlands.

[To face page 809]

The Chemist & Druggist
Special Issue,
June 28, 1930

The Mortar and the Gaper

A Note on a Remarkable Variety of Pharmaceutical Signboard Peculiar to Holland

By Prof. P. Van der Wielen

Director of the Pharmaceutical Laboratory in the University of Amsterdam

MORE than sixty years ago Jacob Larwood and John Camden Hotten wrote their 'History of Signboards, from the Earliest Times to the Present Day." In our time there are far fewer examples of signboards than when Larwood and Hotten's book was written. In every country the designation of premises by a simple number has almost entirely replaced indication by means of a signboard; the signboard has thus become a mere ornament or at most an advertisement. Professor Stoeder, in his "Geschiedenis der Pharmacie in Nederland," gives a list of sixty-six pharmacies known in Amsterdam in the year 1637, with the names on the signboards used by their owners. The most used emblems were the gaper, the mortar, and the salamander, which afterwards became the typical emblems of the pharmacy. There was a decided difference in their signification, however. The salamander was especially the emblem of the pharmacist, who used it as an indication of his ability to prepare chemicals. The mortar was more generally used by all pharmacists, and the gaper by unqualified vendors of drugs.

The salamander signboard, generally showing the salamander in the heart of a burning fire, has almost disappeared in our day; about thirty years ago I saw it on three or four houses in Amsterdam. At present the Medico-Pharmaceutical Museum in Amsterdam possesses some specimens carved in wood, stone, or painted on glass, examples of which are reproduced on following pages.

The mortar is still seen occasionally as a means of indicating the premises of a pharmacist, and a quite recent example of it shows that the younger generation appreciates this method of calling attention to the profession.

A Sign Used Nowhere Else

Entirely Dutch, however, is the gaper; that is used nowhere else in Europe. It is employed in Holland, even at the present day, not only by the qualified pharmacist, but also by the unqualified drug seller. One can find it in almost every town in Holland, not indeed so frequently as in former days, but in sufficient numbers to attract the attention of the visitor. Sometimes the head is excellently carved, while at other times it is obviously only the production of an unskilled workman. The gaper, which consists essentially of the head of a man with a wide-open mouth, shows a great variety of shape and colour. It may be a soldier, a moon, a man with a monkey, a "gentleman" in top hat, a bearded old man, a fool with a fool's cap and so forth. Sometimes the gaper is ornated with poppy heads, and it is always painted in bright colours.

Dutch people have indulged in many conjectures about its origin. One of the most improbable explanations given relates that long ago a man whose name was Gaper sold medicines of great repute in a small Dutch town. His name became a guarantee of quality; other people assumed it without his sanction, and even used a portrait or other representation of his features to indicate that their medicaments were equal in quality to his.

The most probable explanation runs somewhat as follows. The gaper, with his motley attire, is a survival of the days when medicines were sold in market places by travelling "doctors," who attracted the attention of the public partly by playing a trumpet, horn, or other loud instrument, partly by exhibiting their skill in extracting teeth (as one may see in old Dutch pictures), and partly by means of an attendant fool traditionally attired and with or without a monkey. The "doctor" often professed to be a Moorish practitioner, or at any rate to have come from a distant country where he gathered his strange medicaments; and he spoke such a motley of languages that if, as was probably the case, he was really a Dutchman, his own mother would scarcely recognise her son. It eventually came about that, quacks imitating qualified men (and qualified men occasionally imitating quacks), pharmacists attracted attention to their shops by using as a signboard a presentation of the fool or of his master. The open mouth is supposed to indicate the attitude of the patient either in interviewing the prescriber or in taking his medicine. The most beautifully carved of the old gapers are to be found in the Medico-Pharmaceutical Museum of Amsterdam; some, however, may still be seen on premises in the streets, and their use is not confined to the older members of the craft.



AN AMSTERDAM GAPER
Now in the Medico-Pharmaceutical Museum



Entrance to the Medico-Pharmaceutical Museum of Amsterdam.



A very fine and artistically carved gaper (seen above the entrance to the Museum on the left). It was the sign of an Amsterdam pharmacy.





Two examples from old Amsterdam pharmacies. On the left a helmeted soldier, and on the right a turbaned Moor.

CURIOUS VARIETIES OF THE "EVER-OPEN MOUTH" AS A PHARMACY SIGN



The celebrated top-hatted gaper which was seen in one of the main streets of Amsterdam until 1922.





A painting of 1850 shows a top-hatted gaper in front of a pharmacy in the Leidsche Straat.



The turbaned gaper with a monkey on its shoulder on the left was formerly a sign of a well-known Amsterdam pharmacy. On the right is a painted Salamander sign from a pharmacy in the Warmoe Straat, and now in the Medico-Pharmaceutical Museum.

THE SIGN OF THE GAPER AND HOW IT WAS DISPLAYED

Pharmacy Signs of Unusual Interest



Shield of the Corraggione Apotheke dated about 1830. The lettering is in gilded iron with a later wooden frame worked in the baroque style. It is now in the Suidter Apotheke in Lucerne.
Courtesy of Dr. R. Maeder.



Unicorn pharmacy sign with a narwhal horn about five feet long, formerly affixed to the pharmacy in Murnau.
Courtesy of F. Ferchl.



A beautifully carved stone sign of the Salamander now in the Medico-Pharmaceutical Museum, Amsterdam. About 200 years old.
Courtesy of Prof. Van der Wielen.



The ornate Lion pharmacy sign in iron at St. Gall, of the early nineteenth century, includes a gilded child with bottle.



The Sphinx Pharmacy at the corner of the Rue de Lombard and the Faubourg St. Denis, Paris.



A French unicorn in the Rue Lanterne, Lyons.



The admonitory sign of the pharmacy the Eye of God with, below, the arms of the family Cappeler of Coire. The sign was set up in 1795 and is now in the Swiss National Museum, Zurich.
Courtesy of Dr. R. Maeder.



A fine old sign over the entrance to the Fialon Museum in the Faculty of Pharmacy, Paris.



A modern Dutch sign from Mr. A. Barentsen's pharmacy in Dragten, Friesland. Note that this sign represents the ideas of both gaper and mortar as discussed and illustrated.





On the left, one of the only two known engravings of Christ as the Heavenly Apothecary, engraved at Augsburg in 1747 and fully charged with theological symbolism. Right, a fine pen drawing in the Swiss National Museum, Zurich.



A fine steel engraving, Augsburg 1663, one of a considerable series issued in broadsheet form satirising or symbolising various aspects of the Thirty Years' War which was largely concerned with religious disputes. This particular example relates to the hopes of healing of the wounds of one of the most savage of all wars by the Peace of Augsburg.

RARE ENGRAVINGS AND A DRAWING OF THE HEAVENLY APOTHECARY

Christ as The Pharmacist

A Note on Rare Mystical Representations of Our Lord as Pharmaceutical Healer

By Fritz Ferchl, Mittenwald

ART has at various periods been made a medium for the expression of deep-seated religious convictions, and some of our greatest classical masterpieces are based on sacred themes. The desire to reproduce the pharmacist allegorically or in a biblical rôle is the motive the outcome of which is the paintings bearing the inscription "Christ as Pharmacist." Many of the passages found in the Bible concerning Christ, the Divine Healer, who appeals to the mental as well as to the bodily afflictions of humanity, have found their way into the diction of the Fathers of the Church. An expression of this kind is to be found in the words of St. Augustine in his "De Doctrina Christiani," i, 14: "Sicut etiam ille qui medetur vulneri corporis, adhibet . . . etiam quædam similia, sicut linteolum vel rotundo vulneri rotundum, vel oblongum oblongo . . . sic sapientia Dei hominem curans, seipsam exhibuit ad sumandum, ipse medicus, ipsa medicina." Pope Gregory VII, whom history calls "the Great," made use of the same allegory. In his "Homily on St. Matthew" he draws a picture of the Heavenly Physician and Pharmacist and of his remedies. After the patristic period the conception of the Saviour as a physician with healing power found ready acceptance among the mystics and scholastics, who employed it as a basis for speculative argument, particularly in association with the parable of the Good Samaritan.

It was about the beginning of the fifteenth century that this form of allegory found, in a special degree, acceptance among those influenced by symbolism and mysticism. This love of allegorical expression finds eloquent exemplification in numerous theological writings, in works of devotion, and in pictures. This was the basis from which arose these strange and remarkable pictures which present Christ as the pharmacist who extends his aid to those suffering in body and in soul. The pictures originated in those countries where the people were particularly attached to the teachings of the Bible and loved pictorial representation. They were painted where votive tablets are to be found in large numbers, where crosses are frequent in the fields and by the roadside, where the incidents of the Nativity are reproduced and the sculptor of scriptural figures is in his element, where pious people adorn their houses with coloured pictures representing biblical scenes.

In studying the history of art it is possible to follow step by step how these pictures of mystic theology and religious pharmacy originated in Bavaria. The number of pictures, the existence of which has been authenticated, amounts to between forty and fifty, dating from the end of the sixteenth to the beginning of the nineteenth century. The majority are oil paintings, but a few representations of Christ as pharmacist are of a different nature; thus we have stained glass dating from the first half of the seventeenth century and a pen drawing in grey stippling, both of which are in the Swiss National Museum in Zurich. Copperplate engravings representing this motif are very rare, only two copies being known. A unique work of art is a piece of Gobelins tapestry, setting forth the same theme, which till three years ago hung in the chapel in the Castle of Schwarzburg in Thuringia. This Gobelins dating from the old Renaissance (it was made by a successor of Sager Bombeck about the year 1600) has unfortunately been sold and has disappeared from the ken of students. The oldest picture of Christ as pharmacist presenting a Gothic character is a painting on a tablet dating from 1580 now hanging in the Church at Hussenstadt in Würtemburg. The majority of these pictures possess more interest for the historian and the expert in the history of art than artistic value, and only two of the pictures known to the author rise above the level of mediocrity. These are the oil painting of Christ as pharmacist in the parish church at Werder, near Berlin, and a picture full of Rembrandtesque colours in the church in the Castle of Laasphe in Westphalia in the possession of the Prince of Wittgenstein. It is remarkable that identical pictures on this theme are to be found in places which are geographically far apart. Thus a double of the picture in Werder is to be seen in the peaceful pharmacy of a Viennese monastery, while one identical with that in the Castle Church of Laasphe, bearing the date 1731 and signed "Maria Apelli," hangs in the Germanic Museum in Nürnberg. The pen drawing in the National Museum in Zurich is met with in many Bavarian religious houses. It would be of particular interest to investigate how these pictures reached their various present destinations. All of them bear numerous proverbs, and on the pharmacy jars the inscriptions are sometimes pharmaceutical and sometimes religious. In keeping with the doctrine of signatures then current in medicine we frequently find in such presentations a sack of polygala. Gerard says that the plant flowers best in Cross week (Rogation week), lending support to the German name "Gemeine Kreuzblume." As I have mentioned, Christ appears sometimes as a healer in afflictions of the soul and at other times as curing bodily suffering. But in almost every instance are to be found the words, "Come unto Me all ye that labour and are heavy laden, and I will give you rest."



PAINTING ON GLASS OF 1630
Now in the Swiss National Museum, Zurich.
Photograph, Senn.





Left, a seventeenth-century painting in a South Bavarian monastery. Right, a painting of the early eighteenth century in the chapel of the castle of Wittgenstein, Westphalia, a duplicate of which hangs in the Germanic Museum, Nürnberg.

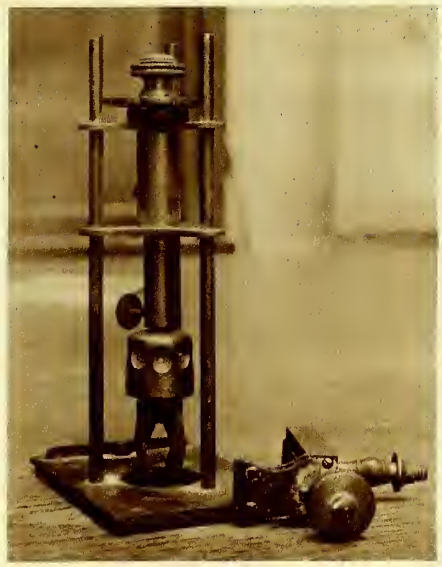
CHRIST THE PHARMACIST

Oil paintings of the seventeenth and eighteenth centuries, showing the Divine Healer with scales and pharmacy jars with mystic labels





These two paintings of the eighteenth century are entirely religious in their symbolism—the jars and other objects bearing idealistic labels, as Love, Benediction, Peace, etc. That on the left is in the collection of Dr. Jo Mayer, Wiesbaden, and that on the right in the church at Werder, near Berlin.



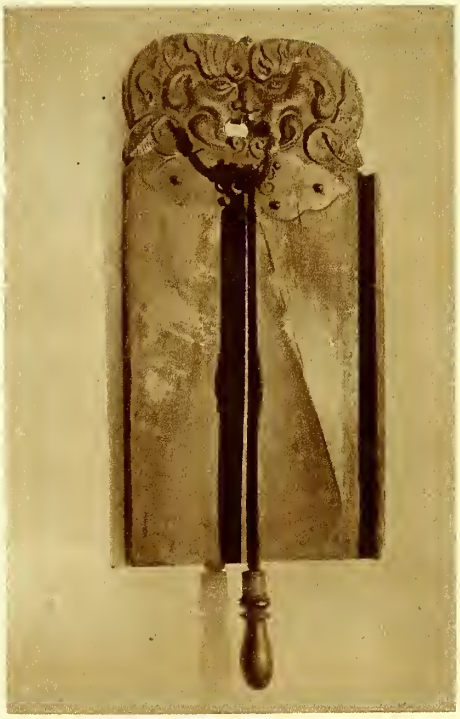


An early type of microtome and an old pharmacy press in use until 1880.

Pharmaceutical Apparatus of other Centuries

From the Reber Collection Lausanne, the Musée Gruuthuuse, Bruges and the Germanic Museum, Nürnberg.









Above, left, ancient earthenware filters with the inscription, "F. Galens, Brugge"; right, a board and knife for cutting herbs (Dr. K. Schöllhorn Collection, Winterthur). Below, a pharmacy press of 1669 formerly in the Obere Apotheke, Kitzingen on Main, and a pill machine about sixty years old from the Pharmacie Schlögel, Bruges.

Photographs by courtesy of Dr. R. Maeder, Fritz Ferchl and M. Van de Vyvère.





Left, a corner of the "King of Hungary" pharmacy in Eger. Founded in 1714, but fittings were originally part of a Jesuit pharmacy. Above, entrance to historical pharmacy in Germanic Museum, Nürnberg. Fittings formed part of the "Stag Pharmacy" in Oehringen (Wurtemberg). The gallery above cupboards is richly decorated with gilt heraldic beasts, amoretti and putti.

BEAUTIFUL INTERIORS OF THE SEVENTEENTH CENTURY



Former interior of Town Pharmacy in Köszeg (Hungary). The fittings originally belonged to a pharmacy established 1681; the walnut carving is said to have been done by the Jesuits. The fittings were purchased by the Town Pharmacy from the Jesuits in 1775 and acquired in 1909 by the Hungarian Technical Art Museum, Budapest.

Photographs by Christof Müller, Nürnberg and by courtesy of M. Othon de Koritsanszky.







Original fittings of the "Golden Star" pharmacy, founded on its present site in 1722 and fitted up 1725-1727 by Wolfgang Friedrich Dietrich. Left, one of the cupboards which stood in the pharmacy. Right, large cupboard in the stock room. Measures about 13 feet square. Columns black with ivy leaf decorations in gold; cornices and stars gilded. In the middle, on the top, are the arms of the Dietrich family, in colours and much gold.

PHARMACEUTICAL SPLENDOUR OF THE EARLY EIGHTEENTH CENTURY

THE "GOLDEN STAR" PHARMACY OF NÜRNBERG

On left, part of the stock room showing the original staircase, with the wooden statues of Mithridates (left) and Andromachus (right). The front of the large drawers containing drugs, is painted with a landscape, the subject in a few instances only bearing some relation to the contents.

Historical-Pharmaceutical Section of the Germanic Museum, Nürnberg.

Photographs by Christof Müller, Nürnberg.





CARDIFF'S MEMORIAL OF THE NORMAN CONQUEST OF GLAMORGAN

Although much of the castle is modern the shell of the ancient keep is considered to be a Norman construction, and some of the lower part of the remaining walls is Norman. The residential quarters were largely built by the Earl of Bedford at the end of the fifteenth century. This includes the great banqueting hall seen in the lower photograph.

Photographs in this chapter by courtesy of the Corporation of the City of Cardiff.

The Busy City of Cardiff

Notes on the History of the Ancient Capital of Morganwg and Features of Special Interest in the Modern City which is to Entertain the British Pharmaceutical Conference, July 21-25, 1930

THE contrast between the austere walls of the Cardiff Castle enclosure, foursquare to all the winds, and the design and spacing of the gracious new buildings that adorn the adjoining Cathays Park imparts to the City of Cardiff a character surely unique in our day. The summary judgment that the city is all modern and has no past is not infrequently uttered; but to take up a point of vantage from which the eye can take in a picture composed of the architecture we have indicated and of its setting is to realise that so fair a scene must comprise an element of history, made and in the making. Some day, probably, an investigator endowed with a sufficiency of historical perspective will take in hand the six volumes of Cardiff Records issued under official auspices, and from them and other sources will weave a fascinating narrative of the town and port from its first beginnings. For our present purpose we may briefly record a few outstanding events, premising that John Speed, the cartographer, was not of those who thought lightly of Cardiff. From a paragraph in the second book of his "Theatre" (1611-12) we take the following:—

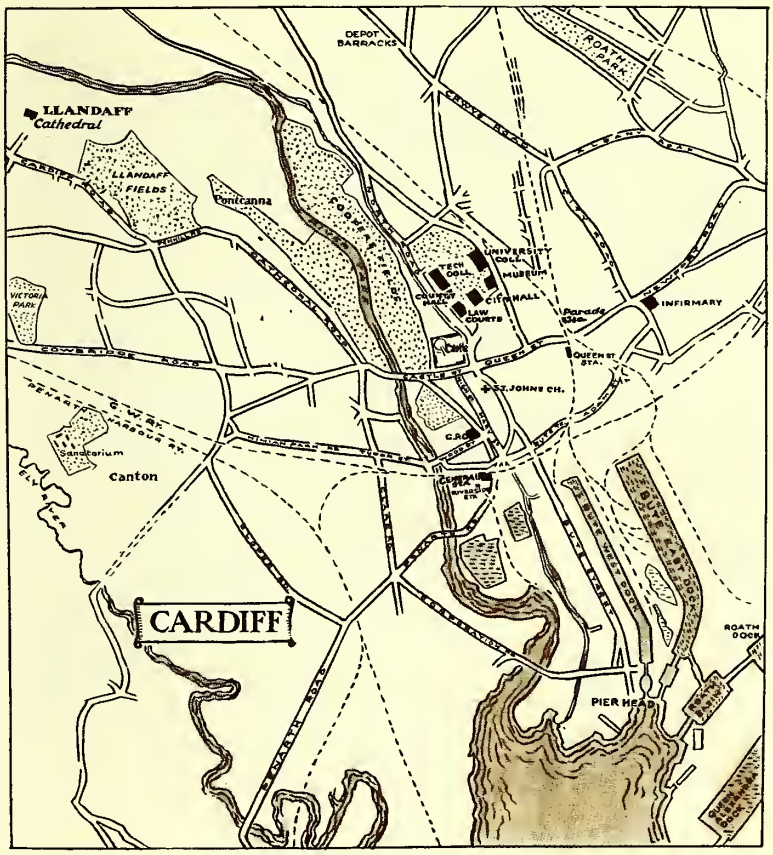
"Vpon whose fall, and East-banke [i.e., the River Taff], the fairest Towne of all *South-wales* is seated. The *Britaines Caerdid*, the English *Caerdiffe*, which *Fitz-Haimon* fortified with a Wall and Castell, in the raigne of King *Rufus*, when he and his *Norman Knights* had ouercome *Rhese* the Prince of these parts, and thrust out *Iestine* from his lawfull possession . . . . Strong was the Castell, as by the trust therein reposed may well appeare, where the youngest brother *Beauclark* kept captiue the eldest *Curthose*, both of them sonnes to the Conqueror, the space of twenty-six yeeres. . . . But as the *Taue* is a friend to the Towne, in making a Key for arriuage of shipping; so she is a foe to *S. Maries Church* in the South, with vndermining her foundations, and threatning her fal."

Defoe—possibly because, as a journalist of exemplary industry, he was aware of Speed's reference—has little to say, in his "Tour," about the town and district. He tells us that he and his guide came "down into a most agreeable vale, opening to the south, and a pleasant river running through it, call'd the Taaffe; and following the course of this river, we came in the evening to the ancient City of Llandaff, and Caerdiff . . . the port and town of trade . . ." Defoe refers to what we call the Bristol Channel as "the Severn Sea."

The instructed enthusiasm of members of the Cardiff Naturalists' Society and other investigators has resulted in the discovery of many prehistoric and other remains. Broadly, it may be affirmed that in the mountainous parts of Glamorganshire Welsh influences are predominant to the exclusion of others, while nearer the Bristol Channel a mixture of races, including the Scandinavian, is to be traced. This may be illustrated in the local place names, which have been carefully studied by Dr. D. R. Paterson. The only name that we have space to mention here is Cardiff itself, which has been variously interpreted as a variant of Caerdaff (the fort on the Taff) and, with more probability, Caerdiff (the fort of Didius, Roman governor of Britain in A.D. 52-57). It has been ascertained that a Roman fort was set up on the site of Cardiff Castle. But prehistoric, Roman, and Saxon remains have not, so far, enabled archæologists to piece together a very detailed record of Welsh life in pre-Norman times.

The Normans in Wales

THE conquest of Glamorgan—or, more accurately, of Morganwg, a district nearly but not quite coterminous with the present county—by the Normans took place shortly before the year 1100. In the absence of satisfactory records of the campaign itself, scattered references have been pieced together from other sources, with great



STREET PLAN OF CARDIFF

ingenuity, by the late Professor Freeman and others. The story runs something like this. About the beginning of the reign of William Rufus, Robert Fitzhamon, a member of a noble Norman family, was granted great estates, chiefly in Gloucestershire, as a reward for services rendered to the King. Exactly who Robert Fitzhamon was has, apparently, never been settled, although he occupies six columns in the Dictionary of National Biography. It is obvious, however, that so powerful a personage was likely to be in request as arbiter in the event of any dispute arising in relation to the ownership of houses, tithes, and so forth. Before long his assistance was invoked in a conflict between rival Welsh princes or chieftains. Fitzhamon set out, accompanied by twelve knights, to assist Testin, prince of Morganwg, against an enemy; and it is not altogether surprising to find events developing in such a way that Fitzhamon and his knights seized for themselves the best of the fertile vale and allotted the uplands to such of the Welsh as were their allies. Freeman sums np the conquest of this territory and its results in picturesque phrases :—

"He founded the abbey of Tewkesbury, one of the line of great religious houses along the Severn, where his work may still be seen in the vast pillars and mysterious front of his still surviving minster. To the older abbey of Gloucester he was a bountiful benefactor. And the nature of his gifts to these two favoured houses would be almost enough of itself to enable us to set down Robert Fitzhamon as conqueror of Glamorgan. Gloucester and Tewkesbury were enriched at the cost of the churches of Glamorgan, proof enough that he who could thus enrich them had won great possessions in Glamorgan. . . ."



DR. WATSON, BISHOP AND PROFESSOR OF CHEMISTRY

Richard Watson, Bishop of Llandaff, was appointed Professor of Chemistry at Cambridge in 1764, although he admitted complete ignorance of the subject. Nevertheless, his later "Chemical Essays" ran to five volumes and several editions.

After the painting by Romney

All that happened between the Fitzhamon campaign and the famous statute of Henry VIII abolishing the distinctive laws of Glamorganshire and assimilating its government to that of England may be inferred from the Cardiff Records and other trustworthy sources. In the earliest times of which there is any record—earlier even than Fitzhamon—the cow was a standard of value in commerce and, possibly, the principal standard; a horse was worth from three to twelve cows, a hawk from six to twelve, a trumpet twenty-four, and a sword with a gilded hilt twenty-five. The first charter of Cardiff, dating from before 1147, but known only by a transcript, is largely a recital of liberties said to have been granted to the burgesses by Robert and William, Earls of Gloucester. It grants, *inter alia*, permission to brew and bake without licence, to make dovecots, a horse mill, and a hand mill. Charters of the thirteenth century mention rentals such as a pair of gloves, twopence in silver, and an iron needle. About the middle of the fourteenth century William la Zousche, Lord of Glamorgan and Morganwg, granted the borough a plot of land *ad edificandum unam domum—vocatum Bothhalle* (for erecting a town hall), subject to the right to hold his court and receive tolls there; and in 1340



ROWLANDSON DRAWING OF CARDIFF LIFE IN 1797

One of Rowlandson's vivid and valuable series of topographical drawings, this shows the top of the High Street with a portion of the ruins of the Castle on the left. This and the portrait above are from the National Museum of Wales.

Hugh le Despenser, by charter, recognised certain rights of the town, including that of appointing two aletasters annually. It should be mentioned that the section of the Cardiff Records describing the Corporation plate was written by the late Mr. Robert Drane, a notable pharmacist to whom further reference is made in a subsequent paragraph.

There seems to be general agreement that the laying waste of Cardiff by or with the connivance of Owen Glendower, in 1403-04, was a setback from which it did not recover to any marked extent till the systematic working of the coal and other products in the hills a few miles north of the city, in the eighteenth century, ushered in a new era. Iron was at first carried down the Vale of Glamorgan on the backs of mules. Then in 1794 the Glamorganshire Canal was constructed; by 1840 steam coal was being exported from Cardiff (and it may be remembered that the greater part of the South Wales coalfield lies within Glamorganshire), and about the same time the construction of the Bute Docks was begun. The increase in Cardiff's population from less than 2,000 in 1801 to the estimated 230,000 of to-day speaks for itself. Within a radius of twenty-five miles from Cardiff Castle, we are told, is to be found half the population of Wales.



LIVING CENTRE OF THE CITY'S TRADE

The great Bute Docks which are now nearly a century old cover 165 acres. In this view the Great Western Railway Company's dock offices are shown.

When the British Pharmaceutical Conference met at Cardiff in 1891, we remarked that St. Mary Street was not a very handsome street, "because the old and the new are blended together a little too roughly." With prophetic foresight we added: "Time will give it polish." The blending has by this time been successfully accomplished, and the process of modernisation is even more evident in Queen Street. Cardiff is, in fact, a city well worth seeing, apart from its historical treasures, and, incidentally, its generous proportion of arcades and tea-shops (or restaurants, as their proprietors would no doubt prefer to have them styled) is surely not exceeded, if even it is equalled, anywhere in the United Kingdom. Open spaces are numerous, effectually conveying an impression of enlightened town planning that sets an example to other cities of comparable size; indeed, Cardiff may well be called the city of parks, seeing that its population is spread over an area measuring about six and a half miles by six. One church alone has much to interest the antiquarian; about the time that Speed was forecasting the fate of St. Mary's Church its fall was, in fact, taking place, and it was not rebuilt until 1843. The older church to which we refer is that of St. John, standing in the heart of the business quarter of Cardiff and dating, as a whole, from the latter part of the fifteenth century. Its finely-proportioned tower, its Herbert chapel, its monuments, stained glass and large Willis organ render it well worth a visit. The docks, extending to 165 acres, and representing annually millions of tons of imports and exports, are briefly referred to in a subsequent paragraph. And on the opposite side of the Taff estuary, Cardiff has, in Penarth, with its bold cliffs of lias limestone, a suburb of great attractiveness. These and many other facts are concisely set forth in an excellently written and handsomely illustrated booklet issued by the Development Committee of the Cardiff City Council.



THE HIGH STREET, LOOKING TOWARDS THE CASTLE

The Public Buildings in Cathays Park

BEFORE we proceed to mention in detail any of the magnificent buildings so admirably placed in Cathays Park, it may be well to give a general idea of the striking effect produced on a first view, an effect which photographs but imperfectly convey. Entering the park from

the south side, the visitor has before him three of these buildings in regular alignment: as our plan of the city shows, the Law Courts stand on the left, the City Hall in the centre, and the National Museum of Wales on the right. Two avenues divide these three buildings. Passing along the one which separates the Law Courts from the City Hall, one arrives at the Glamorganshire City Hall and the Technical College, while the University College occupies a facing position in the second avenue. Up to 1861 the Town Hall was in High Street, and from that year to the construction of the City Hall, in 1904, the municipal services were carried on in a Town Hall in St. Mary Street. The graceful tower of the City Hall, with its gilt-figured clock, dominates the landscape for many miles around. The interior decorations are very striking, particularly the columns of the marble hall on the first floor and the statuary.

National Museum of Wales

TILL one consults the coloured plan in the excellent guide obtainable (in English or Welsh) on entering the National Museum of Wales, it is difficult to realise that this remarkably designed building occupies at present only about a fourth of the area it is destined to cover. King Edward VII granted its charter in 1907; in the following year the first director was appointed, and in 1911 the first contract was placed. Owing to the European war and other causes, the work of building was delayed; it was not until three years ago that King George V, who had laid the foundation stone in 1912, performed the ceremony of opening the Museum to the public. Over the portico will be found carved in the Portland stone the words "AM-GUEDDFA GENEDLAETHOL CYMRU," one of the few reminders that Cardiff, with its cosmopolitan interests, is a Welsh city. Pharmacists will note with gratification that among the busts in the marble-floored entrance hall is one of the late Mr. Robert Drane.

The main purpose of the institution has been stated thus: "To teach the world about Wales, and the Welsh people about their own fatherland." On the educational side the work of the expert staff is grouped into five departments, those of geology, botany, zoology, archæology, and art. Schools of painting are, in view of the youth of the Museum as an entity, surprisingly well represented: there are to be found in the galleries examples of Constable, Corot, Turner, Rossetti, Burne Jones, J. S. Cotman, Brangwn, Augustus John and many other artists of international fame. The work of Welsh artists may also be studied, and in this connection mention may be made of Richard Wilson, R. A. (1714-82), and John Inigo Richards, the secretary of the Royal Academy from 1788 to 1810. The portraits among the oil paintings, though not at present numerous, are of great interest, including those of General Sir Thomas Picton, Robert Owen, Sir John Rhys, David Frangcon Davies and a few living men and women of distinction.

Pharmacy pots and old mortars are well represented in a valuable exhibit from the collection of Mr. Alec S. Johnson, of Robert Drane, Ltd. Several of these are dated: a Spanish drug pot of 1541, an Italian syrup jar of 1584, a bronze mortar bearing the Tudor rose and another of the year 1676 are among those that specially attract the pharmacist. Before leaving, a visit should be paid to the happily named Bygones Gallery on the ground floor, where are to be found ancient household furniture and utensils, a coracle, tally sticks, stocks and—quaintest of all—tongs (made somewhat on the plan of trellis work) for ejecting unruly dogs from church. It is, perhaps, fortunate that services were not broadcast in former times.

The University of Wales

THE University College of South Wales and Monmouthshire, extensive and striking as it is, forms part of the University of Wales, the other constituent colleges of which are at Aberystwyth, Bangor, and Swansea. The departmental committee appointed in 1881 by the Government of the day reported recommending that there should be a University College for South Wales and one for North Wales. The matter was energetically taken up at Cardiff and donations came in rapidly, with the result that in 1883 the University College of South Wales and Monmouthshire was formally opened. Royal charters were granted to the University as a whole in 1893, 1906 and 1920, following an older charter of 1884, which had reference to the College alone. The Chancellor of the University is H.R.H. Prince of Wales, and the Vice-Chancellor is Principal H. A. Jones, M.A.

The Technical College

ANOTHER of the fine buildings grouped in Cathays Park is the Technical College, which contains more than seventy lecture rooms, laboratories, and so forth, providing for tuition in almost every provision of trade and industry in the locality. The total number of students in attendance is over 5,000. The Department of Industrial Chemistry conducts university degrees and diploma courses, and similar facilities are available in the Department of Engineering. The reputation of the Pharmacy Department, the head of which is Mr. Thomas Lewis,



ONE OF CARDIFF'S CENTRES OF LEARNING: THE UNIVERSITY COLLEGE OF SOUTH WALES

Ph.C., stands deservedly high. The department is recognised for the B.Pharm. degree of the University of London as well as for both the qualifying examinations of the Pharmaceutical Society. The principal of the College is Mr. Charles Coles, B.Sc.

Cardiff Castle

IN recent years it has been definitely ascertained that Cardiff Castle occupies the site of a Roman camp, which was surrounded by a wall averaging 10 ft. in thickness. A remarkable portion of this wall was laid bare in 1922-23, and measures were taken to preserve its inner surface untouched. The ancient keep, now only a shell, is regarded as dating from Norman times. We have seen that the castle played its part in the conquest of Morganwg by Robert Fitzhamon. Shortly after that had been accomplished, the tower at the south entrance was built and a certain amount of wall construction was undertaken for the purpose of increasing the security of the fortress. The handsome octagonal tower on the west side (now the residential side of the structure) was erected by an Earl of Warwick between 1425 and 1439; the spire, however, was not added till late in the nineteenth century. The greater part of the residential quarters was added by an Earl of Bedford about the end of the fifteenth century. The castle is now owned by the Marquis of Bute. The library, a noble apartment 75 ft. long and 23 ft. wide, is known for its wealth of books on ecclesiastical history and architecture. The banqueting hall, another magnificent feature of this stately home, has, over the fireplace, a stone carving of the castle gateway from which is issuing a mounted Norman warrior; other figures represent persons of the same period. The public are admitted at stated times to certain parts of the castle and its grounds, the fees being given to charities





TECHNICAL COLLEGE AND THE NATIONAL MUSEUM

The Technical College (above) and the National Museum of Wales (below) are two of the many fine public buildings in Cathays Park.

Llandaff Cathedral

LLANDAFF, now included in the County Borough of Cardiff, is nearer the centre of the city than the stranger might suppose, and a visit to its cathedral should certainly be included in any itinerary that the visitor may plan. The approach to it on one side is by way of a low hill, at the foot of which it stands, thus deriving a seclusion very attractive to the noise-ridden tourist of the twentieth century. The cathedral has a length of 200 ft. (or, if the Lady Chapel is included, 245 ft.), a width of 70 ft., and a height of 65 ft.; its two towers at the west end are respectively 195 and 105 ft. high. The foundation has considerable claims to be the oldest site of a Christian church in Great Britain, dating back to at least the beginning of the sixth century, and there is even reason to think that it occupies the site of a pre-Christian burial place. The name of Dyfrig or Dubricius, the first Bishop of Llandaff after Teilo, the putative founder of the cathedral, is widely familiar; the year of his death is given as 612, and about six centuries later one of his successors caused his remains to be reinterred in a tomb now to be seen in the north aisle. This successor was Bishop Urban, traces of whose reconstruction of the fabric are still to be found in the wonderful Norman arch over the altar and elsewhere.

The history of Bishop Urban's building is a chequered one. About the middle of the sixteenth century it began to fall into disrepair, and by 1575 its condition became serious, the immediate cause being the alienation of revenues that should have been applied to its upkeep. In 1720 one of the towers fell, bringing with it a considerable part of the roof of the nave. Shortly afterwards the east end of the cathedral was patched up in a quasi-Italian style; and it was not until the middle of the nineteenth century that adequate restoration was taken in hand. The altar steps, of Purbeck marble, retain numerous pits and other marks of their rough usage during the years of ill fortune.

A Murillo, recently presented, hangs in the choir; and even more interesting is the triptych behind the altar,

representing in the centre the Nativity and on either side David as shepherd and as king. This richly coloured painting is understood to be the only one of the kind that D. G. Rossetti ever undertook. The panels of the stone pulpit were designed by Woolner and, like much of the interior decoration, were carved in Llandaff workshops. Burne Jones and some of his contemporaries contributed designs for stained glass.

A few lines should be added on one of the long succession of bishops, Richard Watson, who was born in 1737 and died in 1816. Dr. Watson is of interest to us chiefly by reason of the fact that in 1764 he was appointed Professor of Chemistry by the Senate of Cambridge University, although, according to his own statement, he "had never read a syllable on the subject nor seen a single experiment." However, he sent to Paris for an assistant, and after about a year (in the course of which he had by accident blown his workshop in pieces), commenced courses of lectures that attracted large audiences. His "Chemical Essays," in five volumes, ran into several editions. Watson must have been a remarkably versatile man, for he became a doctor of divinity and Regius Professor of that subject in his university, a member of various learned societies, and a voluminous writer of sermons and pamphlets.

The Bute Docks

THE history of the extensive series of docks occupying the south-east portion of Cardiff is fairly well known, at any rate in outline. On account of the lack of facilities for exporting Glamorganshire coal, the second Marquis of Bute decided to build a dock to accommodate the increasing trade of the port. At his own expense he undertook the construction of what is now known as Bute West Dock, and this was opened in 1839. From this beginning has grown, as our plan of the city shows, a series of deep-water basins only equalled in the largest seaports. It is superfluous to point out that Cardiff is now one of the world's principal ports, particularly so far as the coal trade is concerned. Figures are usually dry, but it may be mentioned that the estimated coal output for South Wales in 1928 was 44,203,000 tons. The total area of the Bute Docks is now 165 acres. Although coal has been mentioned in particular, it must not be forgotten that many other imports and exports pass through the same channel; it is only necessary to mention iron, steel, grain and potatoes.

Scientific Societies

SO far as is known, the first scientific society to be established in Cardiff was the Glamorganshire and Cardiff Literary and Scientific Institution, founded in 1837, with the Marquis of Bute as president. The Institution came to an end in 1859; but the books and objects of interest collected under its auspices were transferred to the Free Library and Museum Committee. In 1841 the Mechanics' Institute was formed, principally for the purpose of conducting lectures on scientific subjects; this organisation continued for several years.

The Cardiff Naturalists' Society, founded in 1867, is without much doubt the most important of the scientific bodies of Glamorganshire. Commencing with a membership of twenty-four, the Society now numbers several hundred members. It has published more than one treatise on local natural history, and its various sections organise lectures and field meetings. Pharmacists may well remember with gratification that one of the founders of this flourishing institution was Mr. Robert Drane, the Queen Street chemist, who died in 1914 at the ripe age of eighty-one. Mr. Drane, in an address to the Cardiff Pharmacists' Association, once told of the meagre provision for scientific instruction in his apprenticeship days in the 'forties. The only text-books allowed were the "London Pharmacopœia" and Gray's "Supplement," and a heated controversy arose between the partners of his firm of employers when the purchase of three more modern books was sanctioned by the junior partner. At the conclusion of his four years' apprenticeship, Mr. Drane became an assistant with Allen & Hanburys, at the old Plough Court shop, but left them after a time owing to a conflict of principle arising. He commenced business in Bute Street, Cardiff, in 1858, removing ten years later to Queen Street, to premises built to his own design. Not only was Mr. Drane a founder of the Cardiff Naturalists' Society, but he enriched the Cardiff Museum with many valuable curiosities and formed the remarkable collection of china now in the possession of Mr. Alec S. Johnson. He was also interested in old silver, needlework and other curios, and served on the Cardiff Library Committee for more than fifty years. An appropriate medallion was unveiled in 1927 on the front of his old pharmacy (still in the occupation of his successors): below a bust of Mr. Drane, with the dates of his birth and death, was the inscription: "Here lived Robert Drane, F.L.S., naturalist, antiquary, and connoisseur. This tablet was erected to his memory by the Cardiff Naturalists' Society, which was founded in these premises in the year 1867."

Among other local scientific societies may be mentioned the Cardiff Photographic Society, founded in 1886, and the Astronomical Society of Wales, which dates from 1895.



THE DOMINATING STRUCTURE OF THE CITY HALL IN CATHAYS PARK

Three Hundred Years of Cinchona

A Short Account of the Discovery and Application of Peruvian Bark since its First European Use in 1630

By E. M. Holmes, Ph.C.

President of the British Pharmaceutical Conference, 1900

THE history of the introduction of Peruvian bark into Europe as a febrifuge 300 years ago is one of the most interesting in the domain of medicine, and 1930 forms an appropriate anniversary for recalling the curious facts of the discovery of its properties and tracing the increase in its popularity until it became regarded all over the world as the sheet-anchor in the treatment of intermittent malarial fever, and as an absolute necessity among the medicinal products stored by the governments of all nations, thus leading to the cultivation of cinchona to an enormous extent in all countries where it is possible to grow it, such as India, Java, and Burma.

Peru was discovered and invaded by the Spaniards in 1513, but the country did not settle down under its new rulers until about 1560, when the Marquis of Cañete was appointed as viceroy; and it was not until about forty years afterwards (according to Joseph Jussieu) that the use of the bark became known to Europeans. The Jesuits reached Peru at an early period, and were naturally the most likely to gain information concerning the medicinal and economic products of the country; it would consequently be through them that such knowledge would be communicated to Europe. But curiously enough the natives were apparently not agreed as to the medicinal value of the bark. That it was not in general use by them is certain.

Humboldt was of opinion that the natives were ignorant of the qualities of the bark until the Spaniards discovered them, and declared that the natives of Loxa would, in his time (about 1800), rather die than have recourse to the use of what they considered to be so dangerous a remedy. Pöppig in 1830 found that the natives of Huanuco had a strong repugnance to the use of cinchona bark as a remedy for fever, although they are much subject to tertian agues. The same fact was noticed by Spruce, further north, in 1861. He stated that it was impossible to convince the cascarilleros (collectors) of Ecuador and Colombia that their red cinchona bark could be used for any other purpose than dyeing cloth, and that even in Guayaquil there was so general a prejudice against quinine that when a physician administered it he was obliged to call it by some other name. Yet it was through natives that the Jesuits came into possession of the knowledge, and through practical use that confirmation of the value of the bark in the treatment of intermittent fever was obtained. In 1738, more than a century later than the discovery of its medicinal use by the Jesuits, de la Condamine found a legend current among the natives of Loxa to the effect that the properties of the bark had been revealed in consequence of an earthquake in the neighbourhood of Loxa which had caused a number of cinchona trees around a lake near it to fall into the water; an Indian ill with a violent fever and parching with thirst had drunk water from the lake near the trees, and had been rapidly cured.

It was not until 1600, according to Joseph Jussieu, that a Jesuit who had a fever at Malacotas near Loxa, 230 miles south of Quito, was cured of it by an Indian cacique who was engaged in collecting cinchona bark and with whom the Jesuit lived. M. de la Condamine also found a MS. in the library of a convent at Loxa in which it was stated that the Europeans of the province used the bark about the same time. Its use as a remedy for fever was either kept secret among a few, possibly in the neighbourhood of Loxa only, or was valued by some and disregarded by others. The first definite statement of its actual medicinal use by Europeans was made in 1630, when Don Juan Lopez de Canizares, the Spanish corregidor, was taken ill with an intermittent fever and was cured by an Indian cacique of Malacotas, who revealed to him the curative properties of the bark and the proper way to administer it.



EARLIEST FIGURE OF A CINCHONA TREE

From Nicolas de Blegny, "Le Remède Anglais pour la Guérison des Fièvres," 1682

The Countess de Chinchon's Illness

A few years later, in 1638, the Countess Ana de Chinchon, who accompanied her second husband to Lima on his appointment as Viceroy of Peru in 1629, was attacked in her sixty-third year by a tertian intermittent fever. The corregidor of Loxa, hearing of it, sent a parcel of the powdered bark which had cured him in 1630 to Don Juan de Vega, the learned physician attending the Countess, assuring him it was a sovereign and never-failing remedy for "tertiana." The physician tried it and the Countess was completely cured by its use. She consequently had a quantity of the bark collected and distributed it through her physician to the indigent poor of the neighbourhood suffering from ague. In the next year the news of it appears to have reached Spain through the Jesuits, for it was reported to have been tried in that year by an ecclesiastic at Alcala de Henares near Madrid. When in the spring of 1640 the Countess returned to her native home at Chinchon in Spain, she brought a quantity of the remedy with her, which she intended to distribute to the sufferers from tertian agues on her husband's estate in the fertile,



but unhealthy vegas or plains near the rivers Tagus and Tajuna. The powdered bark gradually became known in Europe, and was appropriately called in Spain the Polvo de la Condesa, or Pulvis Comitissæ in Italy—i.e., the Countess's powder, and by this name was long known to druggists and in commerce. Dr. Juan de Vega, the physician of the Countess, followed his patient back to Spain, also bringing with him a quantity of the bark, which he sold at Seville, where he resided, at 100 reals per lb.

The bark continued to have the same high value and the same reputation until the trees became scarce and the bark consequently adulterated. The crown bark originally sold at Panama for 5 or 6 dollars and at Seville for 12 dollars per lb., but in later times when it was much adulterated, the price fell to one dollar per lb. Seville had at that time a monopoly of the products of Peru for Spain, so that the bark could be readily obtained through that city. In the Netherlands it was certainly known and used in 1653, since it was described by Chifflet, physician to the Archduke Leopold of Austria, Viceroy of the Netherlands and Burgundy, in that year. Chifflet states in his "Pulvis Febrifugus Orbis Americani Ventilatus," published in Brussels, that "amongst the wonders of the day many reckon the tree growing in the kingdom of Peru which the Spaniards call Palo de Calenturas, i.e., *Lignum febrium*. Its virtues reside chiefly in the bark which is known as China febris, which taken in powder, drives off the febrile paroxcyms." He

CINCHONA OFFICINALIS—CONDAMINE'S PERUVIAN BARK

This plate, reproduced from the "Botanical Magazine," Vol. 89, 1863, was contributed by John Eliot Howard, the first to flower a species of cinchona in England. The seeds were procured by Howard himself from the mountains of Uritusinga in Ecuador, and he ascertained that this is the very "Quinquina" plant which de la Condamine described and attempted to bring to Europe in 1737, but lost after cherishing the plants through 1,200 leagues of the voyage.
British Museum.





CONDAMINE AND MUTIS: OUTSTANDING FIGURES IN THE HISTORY OF CINCHONA

Charles Marie de la Condamine (1701-1774) whose place in the history of cinchona is indicated in this article, is remembered chiefly as a mathematician and a wit. In 1736 he joined an expedition in the course of which he began his work on quinquina. José Celestius Mutis (1732-1808) began to study botany at Madrid, where he was a professor of anatomy, in 1757. He spent several years in New Granada as physician to a Spanish viceroy. In addition to his work on cinchona he is credited with having discovered the medicinal uses of ipecacuanha, balsam of tolu and balsam of Peru. *From the Russell Collection, Linnean Society, and A. de Humboldt and A. Bouplan's "Plantae Equinoctiales," Library of the Linnean Society.*

further states that during the last few years the bark has been imported into Spain; in 1650 parcels of the powdered bark were sent by the Jesuits to Cardinal Juan de Lugo at Rome, who distributed it to members of that fraternity throughout Europe. Chifflet adds that it was carried from Italy to Belgium by the Jesuit fathers and that it was also brought thither direct from Peru by Michael Belga, who had resided some years at Lima. Roland Sturm, a doctor of Louvain who wrote in 1659, states in his "Febrifugi Peruviani vindiciarum pars prior" that the new febrifuge was known in Brussels and Antwerp as Pulvis Jesuiticus because the Jesuit fathers were in the habit of administering it gratis to indigent persons suffering from quartan fever, but that it was more commonly called Pulvis Peruanus, or Peruvianum Febrifugum. At Rome it bore the name of "Pulvis eminentissimi Cardinalis de Lugo" and "Pulvis Patrum." In 1658 Sturm

PARS PRIOR. 11

ro. Saltem vox hæc nunc exolevit, nec usitatus hodie per totum Belgium proferri consuevit quam nomine pulveris peruani, sive Peruviani Febrifugi; Peruviani quidem, quod ex Peruvio allatus sit, vel ejus arbor ex cujus cortice conficitur Peruvii crescat; Febrifugi, quod contra febres valeat. In Italia vulgari idiomate dicitur *Corteccia della Febre*, quod Latinè sonat Corticem febris, sive corticem Antifebrilem: Vocant hunc insuper *China della Febre*, quasi dicas China contra Febres. Romæ (ut intellexi) multis dictus Pulvis Eminentiss: Card. de Lugo; qui ob eximias virtutes altioriſque doctrinæ præstantiam ex Societate ad purpuram electus, gra-

A 6 tis

It. lis quomodo vocetur.

PVLVIS FEBRIFVGVS
ORBIS AMERICANI,
VENTILATVS
A
IOANNE IACOBO CHIFLETIO.

CAPVT I.

Ex Orbe Americano allatus est in Europam cortex febrifugus; cujus in pulverem redacti frequens usus: Schedion de illo Romæ typis vulgatum.

VRE merito, & ex genio meo, verba Pythagoræ apud Nasonem hîc vsurpo: *Magna, nec ingeniis inuestigata priorum, Quæque diu latuêre, canam.* Lib. 15. Metam.

Sic autem cum Cornelio verè Celso exordior: *Nusquam non fuit Medicina: siquidem imperitissimæ Gentes herbas aliaque prompta in auxilium vulnerum morborumque nouerunt.* Exstimabat clarus in Medicinâ Herophylus, nihil non herbarum vi effici posse; sed plurimarum vires esse incognitas, quòd litterarum ignari illas experirentur, vt qui soli inter illas viuerent. Turpissima causa raritatis, quòd eriam qui sciunt, demonstrare nolunt, tamquam illis periturum sit quod tradiderunt aliis. Ita namque reconduntur, qui pauca aliqua nouêre, sic inuidentes aliis, vt neminem docere in auctoritatem scientiæ sit. Lib. 1. in Proœm. Plinius lib. 25. cap. 2. Lib. cit. cap. 1.

A Non

TWO OF THE EARLIEST BOOKS DEALING WITH CINCHONA

Left, page from the "Febrifugi Peruviani Vindiciarum" of Rolandus Sturmius, published at Louvain in 1659, giving some of the earliest synonyms for cinchona bark and its powder. Right, the first page of J. J. Chifflet's treatise, published in Brussels in 1653, on the Jesuit's or febrifuge powder: one of the earliest known references to cinchona. *British Museum.*

Advertisements.

THese are to give notice, That the excellent Powder known by the name of the *Jesuits Powder*, which cureth all manner of Agues, Quotidian, Tertian or Quartan, brought over by *James Tompson* Merchant of *Antwerp*, is to be had at the Black Spread-Eagle over against Black and white Court in the Old Baily, or at the shop of Mr. *John Crook*, at the sign of the Ship in St. *Pauls* Churchyard, a Bookseller, with direction for using of the same.

AT the sign of the Horse-shooe under *Bow* Church in Cheapside, is to be sold Clocklines, the best that was ever made, both for service, credit, and keeping of a Clock clean; and also Jacklines and Chimny-lines, such as never was made.

The first advertisement in the "Mercurius Politicus" (No. 422, 1658) of Jesuit's powder. *Burney Collection, British Museum.*

saw twenty doses sent to Paris which cost 60 florins.

Introduction into England

In 1655 it began to be known in England. The "Mercurius Politicus" contains in several of its numbers for 1658 (a year remarkable in England for the prevalence of an epidemic intermittent fever), advertisements offering for sale the excellent powder known as Jesuit's Powder brought over by James Tompson, a merchant of Antwerp. In 1669 tariffs of the cities of

Πυρετολογία, '73.
A Rational Account
OF THE
CAUSE & CURE
OF
AGUES,
With their SIGNES
Diagnostick & Prognostick.
ALSO
Some specifick MEDICINES
prescribed for the Cure of all
sorts of AGUES;
With an Account of a successful Method of the Authors for the Cure of the most Tedious and Dangerous QUARTANS.
Likewise some OBSERVATIONS of CURES performed by the aforesaid Method.
Whereunto is added
A short Account of the *Cause* and *Cure* of FEAVERS, and the GRIPING in the GUTS, agreeable to Nature's Rules and Method of HEALING.
Authore RIO TALBOR *Pyretiatro.*
Non multa, sed multum.
London, Printed for *R. Robinson*, and are to be sold at his Shop near *Grays-Inne* Gate in *Holborn*, 1672.

(44)

ous) are the Patients confined within doors, or from any business above two or three dayes at most, during the whole course of their Cure. And let me advise the world to beware of all palliative Cures, and especially of that known by the name of the Jesuits Powder, as it is given by unskilful hands; for I have seen most dangerous effects follow the taking of that Medicine uncorrected and unprepared, *viz.* Convulsions, Epileptick Fits, Phrensie, greater obstructions than before; and such as do take it have only a cessation for a time, the Ague returning in a fortnight or three weeks generally. Yet is this Powder not altogether to be condemned; for it is a noble and safe medicine, if rightly prepared and corrected, and administred by a skilful hand; otherwise as pernicious a medicine as can be taken. I always find that Patient, whose Ague hath been palliated with Jesuits Powder, to require a double method to cure him. Palliative Cures are always succeeded with some or most of these distempers, *viz.* Dropsie, Consumption, Scurvy, Tumours in the Spleen, Hypochondriack pains, and always an ill digestion;

A New Mystery
IN
PHYSICK
DISCOVERED,
By curing of *Fevers & Agues*
BY
Quinquina
OR
JESUITES POWDER.
Translated from the *French*, by Dr. *Belon*, with Additions.
London, Printed for *Will. Crook* at the *Green Dragon* without *Temple Barr*. 1681.

(17)

Let there be put into an Hogshead of Wine, of *Quinquina* made into Powder, the quantity of three drams, or half an ounce to every quart, or more, according to the strength that would be given unto the Liquor: Add of Sassafrax-wood, of Little-Centory, of Juniper-berries, and of Sal Armoniack, of all proportionable to the quart of Wine contained in the Vessel, observing the same Doses as were given in the foregoing Infusion: Let the Vessel be rowl'd up and down divers times, during divers days, to make an exact mixture, and to excite a Fermentation, which, though but small, will not be useless: After which, leave it to settle and to clear.

This very Preparation will be bet-

EARLY TREATISES ON THE USE OF THE JESUIT'S POWDER

1. Title-page of Richard Talbor's "Pyretologia" (1672), containing on page 44 (also reproduced) an equivocal reference to Jesuit's powder, of which, it is believed, his specific was chiefly or entirely composed. 2. Talbor's "Pyretologia," page 44. 3. Title-page of Belon's treatise dated 1681, in which "quinquina" is used as a synonym for Jesuit's powder. 4. A page of Belon's book giving directions for a compound cinchona wine. *British Museum.*





CINCHONA SUCCIRUBRA

Red cinchona bark, which is now official in the majority of pharmacopœias, was practically unknown until 1779, when a Spanish ship bound from Lima to Cadiz was captured off Lisbon and her cargo was found to consist chiefly of red bark, part of which was imported into England. Collectors began to gather this bark in 1785-1788, from which date it appeared in European commerce.
From J. E. Howard, "Nueva Quinologia."



CINCHONA CHAHUARGUERA AND CRISPA

Left, the variety of cinchona which Howard believes to be the original kind from Cazanuma that was used to cure the Countess of Chinchon. It is the "rusty crown bark" of eighteenth century commerce. Right, one of the sources of Loxa bark, the "Peruvian bark" of English medicine.
From J. E. Howard, "Nueva Quinologia."

Leipzig and Frankfort quote "China Chinæ," one-eighth of an anna ("quint") is quoted in the latter city at 50 kreuzers (about 1/6), while the same quantity of opium was valued at 4 kreuzers, camphor at 2 kreuzers and balsam of Peru at 81 kreuzers.

From 1655 to 1659 an acrimonious controversy went on, occasioned by the publication by Chifflet, physician to the Archduke Leopold of Austria, of his "Pulvis Febrifugus-Orbis Americani" at Brussels in 1653, in which he candidly admitted the efficacy of the new drug, when properly used, but was not a strong advocate for it.

The Advocacy of Talbor

Among those who contributed most powerfully to the diffusion of the use of the new medicine was Robert Talbor, alias Tabor, who had been apprenticed to Dean, an apothecary of Cambridge, and settled in Essex, where he practised medicine with much success; subsequently coming to London, he in 1672 published a small book called "Pyretologia, a rational account of the cause and cure of Agues." He was evidently one of those who observed the conditions under which the bark could be successfully used, as did also some of the earlier Jesuits. In this little book he by no means intimates that his method of cure depends only on the use of the bark, but cautions his readers against the dangerous effects of Jesuit's powder when administered by unskilful persons, yet admits that properly given it is a noble and safe medicine. His reputation increased to such an extent that he was appointed in 1678 as physician in ordinary to King Charles II. In

1678 he received the honour of knighthood at Whitehall. As he was not a member of the College of Physicians, and to save him from attack, Charles caused a letter to be written restraining that body from interfering with his medical practice. The appointment led to the issuing of a patent under the Privy Seal granting to Sir Robert Talbor an annuity of £100 a year.

In 1679 Talbor visited France and had the good fortune to cure the Dauphin of an attack of fever, and also treated with success other eminent persons. The physicians, both in England and in France, were exceedingly jealous of the successes of an irregular practioner like Talbor, and were unwilling to admit the merits of his practice. Yet D'Aquin, first physician to Louis XIV, prescribed vin de quinquina as well as powdered bark for the King in 1686. Talbor's happy results brought him into favour with Louis XIV, who induced him in consideration of a sum of 2,000 livres to explain his mode of treatment, which proved to consist of considerable doses of cinchona bark infused in wine and is described in the pamphlet "Les admirables qualitez du Kinkina confirmées par plusieurs expériences" (Paris, 1689). He also made a journey to Spain in the suite of the young Queen of Spain, Louise d'Orleans, niece of Louis XIV, of whom he is described as "premier médecin." On Talbor's death in 1681 (at the age of about forty), Louis XIV ordered the publication of his method of cure, which accordingly appeared by Nicolas de Blegny, surgeon to the King. This was immediately translated into English, under the title of "The English Remedy: or Talbor's Wonderful Secret for Cureing of Agues and Feavers.—Sold by the Author Sir Robert Talbor to the most Christian King, and since his Death, ordered by His Majesty to be published in French, for the benefit of his subjects, and now translated into English for Publick Good." (London, 1682). Cinchona bark first appeared in the London Pharmacopœia in 1677 under the name of cortex peruanus.

Botanical Sources

From 1640 to 1776 no other Cinchona bark was met with in commerce than that which was exported from the Peruvian port of Payta, which was brought down from the forests in the neighbourhood of Loxa and was well known in commerce as Loxa bark; the larger, finer pieces were reserved for use in the royal pharmacy of Madrid and were consequently known as crown bark. This was obtained from the larger, old trees, the ordinary bark being known as Peru or Loxa bark.

The botanical source of the species yielding the original cinchona bark was not ascertained until nearly 100 years after the bark became known in Europe, and for the first accurate information we are indebted to the French Charles Marie de la Condamine, who, while engaged between 1736 and 1743 as an astronomer to measure the arc of a degree near Quito and thus help to determine the shape of the world, availed himself of the opportunity for investigating the origin of the famous Peruvian bark. In February 1737 he visited the Sierra de Cajanuma, two and a half leagues from Loxa, and there collected specimens of the tree now known as *Cinchona officinalis*, var. *Condaminea*, Humboldt. At that date, about 100 years after the first collection of the bark for commercial purposes, the large trees had become very scarce, but there were still trees having trunks larger than a man's body.

Investigation by Ruiz and Pavon

The Spanish botanists, Ruiz and Pavon, also examined the cinchona trees of Loxa; and the latter described two species, *C. Uritusinga*, named from the mountain on which it was once most abundant, and *C. Chahuarguera*, so called from a fancied resemblance of the bark to a pair of breeches ("*huara*" in the Quichua language) made from the fibre of the American aloe (chahuar). To these the botanist Tafalla added the *C. crispa*. These three species are all included in Humboldt's *C. Condaminea*, which is readily known by the little pits, bordered with hairs, at the axils of the veins on the under side of the leaf. It would appear that at one period of growth these little pits or scrobicules are wanting, but when the plant is in full vigour they are markedly prominent. The *C. Chahuarguera* is described by Pavon as growing from eighteen to twenty-four feet in height; although in recent times these trees, which yield the Loxa bark of commerce, have not attained a height of more than from four to nine feet. It is evidently a smaller tree than the *Uritusinga*, and is the variety that Howard believes to be the original kind from Cajanuma that was used to cure to Countess of Chinchon. It is the "rustycrown bark" of eighteenth-century commerce, and then came in very small quills.

The *C. Uritusinga*, according to Markham, grew to the height of a lofty forest tree, a plant affording sometimes up to 100 lb. of bark, but it was in Markham's time (about 1860) nearly exterminated. The leaves assume a red colour before they fall, acquiring the most beautiful tints, and the tree is one of the finest in those forests. It is said that there is a great difference in the bark according as it is grown on the sides of mountains most exposed to the morning or evening sun; and its position is believed to have a great influence on the quality of its alkaloids.

The third variety of *C. officinalis* described by Tafalla bears the name of quina fina de Loxa (or crespilla negra among the natives). All of these are now considered to be varieties of *C. officinalis*, Linn. The Loxa bark was evidently derived from these three varieties, all of which were considered as one species by Humboldt, who gave to them the collective name of *Condaminea;* but at all events the first cinchona bark that came to Europe was collected from the Sierra de Cajamuna two and a half leagues from Loxa, where specimens of the tree were gathered by de la Condamine. Possibly the *Uritusinga* variety, being a larger tree, yielded great quantities of thick trunk bark; but owing to reckless felling through a course of years it is now almost exterminated, and the bark is rarely met with in commerce.

Danger of Extermination

The distinguished botanist Don Francisco Caldas examined the cinchona forests of Loxa sixty years later, between 1803 and 1809. He says that the famous quina tree of Loxa was still growing in the forests of Uritusinga and Cajanuma, at a height of from 6,200 to 8,200 feet above the sea, in a temperature of from 41 to 72 degrees F., but that it is only found between the rivers Zamora and Cachiyacu. His description of its bark and leaves applies rather to the *C. officinalis* var. *Chahuarguera* of Pavon, which is a smaller tree than the var. *Uritusinga*. The young trees were cut down in the first flowering season, i.e., in the fourth to seventh year of their age according as they had sprung from a vigorous shoot or a seed. The trees grow rapidly, those with a stem only six inches in diameter attaining from 53 to 64 feet in height. It was known, however, that if the trunks were cut close to the ground the stump would send up several new shoots that would develop into woody stems. But the natives often pulled up the root, and the young shoots were not protected from the cropping of the cattle; and the annual burning of the herbage on the slope increased the rapid diminution of the cinchona trees.

It was the recognition of these facts that led the French, Spanish and English Governments to send botanical expeditions to Peru to determine the possibility of cultivating the cinchona plant in their own colonies, lest the Peruvian bark supply should altogether cease. It would appear from these researches that Loxa bark was derived from more than one variety of *Cinchona officinalis*, three at least being distinguished, even by the natives, but all belonging, according to subsequent information, to the one original species, *C. officinalis*.

In Peru and Bolivia the cinchona trees form a belt 1,300 miles in length, occupying the eastern slope of the Cordillera of the Andes. In Ecuador and New Granada they are not strictly confined to the eastern slope, but occur on others of the Andes range. They grow at an average altitude of from 5,000 to 11,000 feet, the red bark only descending on Chimborazo to an altitude of 2,000 feet; but the most valuable sorts are not found below 5,000 feet. The temperature most favourable for the generality of the species appears to be 12°-20° C. (54°-68° F.). They generally grow within sight of snow on the mountains, and a transient depression of the thermometer below freezing point and not infrequent hail showers may be borne without detriment by the more hardy species.

The hardships of bark-collecting in the primeval forests of South America are of the severest kind, and undergone only by the half-civilised Indians and people of mixed race, in the pay of speculators or companies located in the towns. The collectors are called cascarilleros or cascadores from the Spanish word "cascara," bark. A majordomo at the head of the collectors directs the proceedings of the several bands in the forest itself, where provisions, and afterwards the produce, are stowed away in huts of slight construction.

The cascarillero, having found his tree, has usually to free its stem from the luxuriant climbing and parasitic plants with which it is encircled. This done, he begins in most cases at once to remove, after a previous beating, the sapless layer of outer bark. In order to detach the valuable inner bark, longitudinal and transverse incisions are made as high as can be reached on the stem. The tree is then felled, and the peeling completed. In most cases, but especially if previously beaten, the bark separates easily from the wood. In many localities it has to be dried by a fire made on the floor of a hut, the bark being placed on hurdles above—a most imperfect arrangement. In Southern Peru and Bolivia, however, according to Weddell, even the thickest Calisaya bark is dried in the sun without requiring the aid of the fire.

The thinner bark as it dries rolls up into tubes or quills called canutos or canutillos, while the pieces stripped from the trunks are made to dry flat by being placed one upon another and loaded with weights, and are then known as plancha or tabla. The bark of the root was formerly neglected, but is now in several instances brought into the market. In some places the bark is stamped in order to reduce its bulk. The dealers in the export towns enclose the bark in serons (from "zurrón," the Spanish name for a pouch or game-bag) of raw bullock hide, which, contracting as they dry, tightly compress the contents (100 lb. or more) of the packages.

Cinchona peruviana, the "Casca de Pata de Gallinazo," of the natives, grows at a lower elevation than *C. nitida* between that species and *C. micrantha*, but is rarer than the *micrantha*. It grows in open situations exposed to rain and sunshine. The Huanuco barks get their name of grey bark owing to the over-spreading whitish thallus of various graphideous lichens. Both trees grow to a large size, some of them thirty inches in diameter and seventy feet high.

An Unofficial Bark

Huanuco bark has not been official in this country, but was among the official barks described in French materia medica works until 1896. It was discovered by Don Francisco Renquiso in 1776, on the mountains of San Christoval de Cuchero in the province of Huanuco in Northern Peru, and Don Manuel Alcarraz brought the first sample of Huanuco bark to Lima. About the same time (1777) the Spanish government organised a botanical expedition to explore the cinchona forests of Peru under Don José Pavon and Don Hipolito Ruiz. They traversed the valley of Chin Chao and explored the Hill of Cuchero or Cochero, near Huanuco; they discovered seven new species of cinchona, and ultimately resided for two months with Don Francisco Pulgar and Don Juan Tafalla, who had joined them by order of the King of Spain as pupils and associates in their work. Ruiz and Pavon returned to Cadiz, but Tafalla continued his researches in the province of Huanuco, discovering *Cinchona micrantha* in the cool shady forests of Monzon and Chicoplaya on the lower slope of the Carpis and Cocheros mountain, with an elevation of 4,000 to 5,000 feet.

This species and two of the seven previously discovered by Ruiz and Pavon, viz., *C. nitida* ("cascarilla fina")—which grows on the higher parts of the mountains where it is colder, where soil is thinner (about 6,000 to 7,000 feet)—and *glandulifera* ("cascarilla negrilla") at first formed the bulk of the Huanuco or grey bark of commerce. The discoveries of the Spanish botanists induced the merchants of Lima to speculate in bark, and brought the grey barks of Huanuco into the European markets. In 1785 Don Juan de Bezares, a Lima merchant, devoted 2,000 dollars to the exploration of the forests of Huamalies. He penetrated along the banks of the Monzon to Chicoplaya, passing mountains thickly covered with cinchona trees, and engaged people to collect the bark. Thousands of arrobas (one arroba=25 lb.) were thus obtained of the bark of *C. glandulifera*. At first, in the best years, as much as 25,000 arrobas of bark was exported from the province of Huanuco, and some large fortunes were made. Up to 1826 the principal supplies of grey bark were derived from *C. nitida*, but subsequently they were believed to have come from *C. micrantha* (see J. E. Howard's "Nueva Quinologia de Pavon" for illustration).

Last but not Least

Calisaya bark, although one of the most important, was one of the last to contribute supplies to the European markets. The tree was first made known by the German botanist Haenke and a Spanish naval officer named Rubin de Celis, who drew the attention of the natives to the valuable forests on the eastern slopes of the Bolivian Andes in 1776. Its value was evidently soon appreciated. In 1790 the Calisaya bark was highly prized in Madrid, but it was not until 1820 that it was found to contain more quinine than any other species. After that year the demand for Calisaya bark increased enormously.

At first the bark of *Cinchona calisaya* was erroneously supposed to be derived from *C. cordifolia*, which Mutis had called "yellow bark," but the *C. calisaya* was the yellow bark of pharmacy. The wholesale drug lists of the early half of the last century distinguished the yellow bark by the name "C. cordifolia." The name "calisaya" is of uncertain derivation. Weddell attributed it to the Quichua words "colli," red, and "saya," form; Pöppig from "colla," a remedy, and "salla," rocky ground. Dr. Laefdael, the judge of Caravaya, told Markham that it came from "ceali," strong, and "sayay," to become or to be. Calisaya is, however, the name of a family of Indian caciques in Caravaya, one of whom acted an important part in the revolt of 1780-81, and his name may have been given to the tree.

The first mention of the red bark tree appears to have been in 1738, when de la Condamine spoke of red bark as being of a superior quality. The tree that yields this bark was practically unknown until 1779, when a Spanish ship bound from Lima to Cadiz was captured off Lisbon and her cargo was found to consist chiefly of red bark, part of which was imported into England. Ruiz states that in 1785-88 collectors began to gather the bark of *Cinchona succirubra* and to sell it at Guayaquil, and from that date it appeared in commerce.

The number of species of cinchona is given in the Index Kewensis of 1895 as sixty-seven, but a few more have probably been added to the list since that date. The chief of these which have been used in pharmacy and may be called medicinal barks include pale or crown bark (*Cinchona officinalis*), red bark (*C. succirubra*), yellow bark (*C. calisaya*), Huanuco bark (*C. nitida*) and other allied species used chiefly in France.

Some Early Press Advertisements

Notes on Forms of Medical and Pharmaceutical Publicity in England from 1652 to the end of the Eighteenth Century

ADVERTISING in the Press dates, according to the evidence of the available records, from a slightly earlier period than advertising by means of pamphlets, broadsides or handbills. The scope of this article is restricted to Press advertisements. It may be remembered that in our Special Issue of June 25, 1927, we published an account of several proprietaries of the seventeenth, eighteenth and nineteenth centuries, with their laudatory pamphlets; to these may be added an example of the year 1774, "A Concise Account of the Properties and Effects of the Poudre Unique, in the Cure of the most dangerous . . . Diseases. By T. Seymour, M.D., Late Chemist to his Majesty," who saw fit to charge 2s. 6d. for this recommendation of an article sold by his firm at 5s. 3d. a packet. We further limit our purview in two respects—first, by refraining from any attempt to elucidate the subtle Press activities of Joanna Stevens, Robert James and Joshua Ward, whose campaigns were on an epic scale worthy of the pen of a Lytton Strachey; and secondly, by excluding such extraneous topics as touching for the king's evil, though that was duly advertised in "The London Gazette." It is, however, of interest to observe that Charles II had a habit, for reasons not difficult to divine, of discontinuing his charitable ministrations during the summer; indeed, in 1682 the Gazette of September 25-28 announced that the next series of functions was further postponed till "the latter end of next Month."

The Beginnings of Press Advertising

Given the requisite circumstances, one can easily imagine a Commonwealth law case, of the length dear to novelists, turning on the question "What is an advertisement?" As we indicated in our Special Issue of two years ago, J. B. Williams, in his "History of English Journalism," assigns the commencement of regular newsbook advertising to the year 1648. (The newsbook, consisting of several small pages, was the earliest form of the newspaper. It was obviously destined, by reason of its greater convenience, to supplant the written newsletter; but we may note, in passing, that the process was a gradual one. In the issue of "The New State of Europe" for July 15-19, 1701, we read: "This Half Sheet is left for the Conveniency of Gentlemen to write Letters upon, and for Advertisements . . ."). After this digression, let us take an example. At the end of the issue of "Mercurius Pragmaticus" for June 8-15, 1649, and in larger type than the rest of the contents, is the following:—

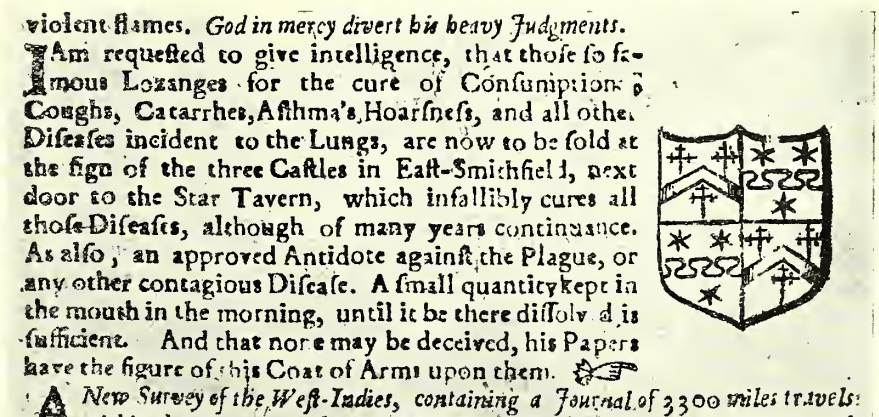
"A Seasonable Expostulation with the Netherlands, shewing their ingratitude to England, is lately published. Worthy of serious perusal."

Neither publisher's address nor price is appended, and we are left wondering whether the announcement is simply a piece of propaganda. Not unnaturally, the earliest advertisements (or "advices," to use the term then current) related to books and sermons, printers, no doubt, thinking first of their own publications or those of their friends when any issue of a newspaper had space left after the news was inserted. These advices, like the one we have quoted, continued for a time without either address or price, London being presumably so small that everyone who could read would know or guess where to obtain anything that was published. Within a year or two the publishing trade gained a more businesslike footing; and on account of its points of pharmaceutical interest the title of one of the books advertised in "Severall Proceedings in Parliament," No. 79, 1651, may be quoted:—

"Matæotechina Medicinæ Praxeωs. The Vanity of the Craft of Physick. Or, a new Dispensatory. Wherein is dissected the Errours, Ignorance, Impostures, and Supinities of the Schooles, in their main Pillars of Pu[r]ges, Bloodletting, Fontanels or Issues, and Diet, &c., and the particular Medicines of the shops. By Noah Biggs, Chymiatrophilos. Sold by . . ."

A later issue (No. 112) of the same paper had an announcement of "The Ladies Dispensatory," without mention of either author or price. These advertisements appeared in many sizes of type and in all parts of the newspapers, though seldom on a front page. The 1650 appeal for lost horses, for instance (often erroneously referred to as the earliest Press advertisement), is to be found in the left-hand margin of the last page; and in the same year two marginal advices are printed sideways as a single paragraph.

The first advertisements of direct concern to chemists are to be found in two issues of "A Perfect Diurnall"



violent flames. *God in mercy divert his heavy Judgments.*

I Am requested to give intelligence, that those so famous Lozanges for the cure of Consumption, Coughs, Catarrhes, Asthma's, Hoarsness, and all other Diseases incident to the Lungs, are now to be sold at the sign of the three Castles in East-Smithfield, next door to the Star Tavern, which infallibly cures all those Diseases, although of many years continuance. As also, an approved Antidote against the Plague, or any other contagious Disease. A small quantity kept in the mouth in the morning, until it be there dissolved is sufficient. And that none may be deceived, his Papers have the figure of his Coat of Arms upon them.

A *New Survey of the West-Indies, containing a Journal of 3300 miles travels within the main Land of America; with a Description of that great City of*

AN EARLY ATTEMPT AT ILLUSTRATING AN ADVERTISEMENT, PRINCIPALLY BY WAY OF CAUTIONING THE PUBLIC AGAINST SIMILAR GOODS

From "The Faithful Scout," May 18-25, 1655 *Burney Collection, British Museum*

TAR WATER.

CArefully prepar'd from the beſt Norway Tar, infus'd in a delicate ſoft Water, according to the Directions of the learned Dr. Berkeley, Lord Biſhop of Cloyne, in his excellent Treatiſe on the Virtues of Tar Water.

Sold at the Tar Water Warehouſe behind the Thatch'd-houſe Tavern in St. James's-ſtreet; at Mr. Amey's, at Charing-croſs, and at Mr. Gardner's, oppoſite to St. Clement's Church in the Strand.

Price Six-pence a Bottle, ſeal'd up with Directions at large, both of its Virtues, and the Manner of taking it.

With good Allowance to ſuch as ſell it by Retail.

N. B. It is good againſt the Scurvy, and all cutaneous Eruptions, occaſion'd by Faſt-Living and Foulneſs of the Blood; againſt the Small-Pox, Pleuriſies, Conſumptions, Coughs, and Ulcers in the Bowels; againſt Lowneſs of Spirits, Indigeſtions, and Loſs of Appetite, with many other Diſtempers.

ONE OF THE NUMEROUS ADVERTISEMENTS OF TAR WATER, WHICH HAD A GREAT VOGUE IN LONDON IN 1744

Burney Collection, British Museum

in 1652. One (June 5-12) relates to a mineral water:—

"There is lately found out at Barnet 10 miles from London, an excellent purging water, it springs from a Saltniter mine; halfe the quantity workes as effectually as that of Epsum water will, its much approved off by severall eminent Physitians. Those that have occasion to make use of it, may upon their repaire thither have it free."

We cannot visit our spas to-day on such easy terms. If, however, this offer seems too regardful of the purchaser's pocket, the second in the same journal (August 9-16) makes amends in that respect:—

"*Out of love to Chymistry, and for Publique good, we have inserted these lines following:* That at a Physitians house in *Flying horse* Court in *Fleet street*, may be had these Chymical and Sympathetical medicines. . . .

"A water for 3sh. the ounce, that will purifie the face to an exact clearness and fresh colour, keep it from wrincles, take off freckles, morphew, Sunburn, &c. . . .

"An Oil for 4sh. an ounce, that will change red hair brown or black. . . .

"A Powder and a plaister for 20sh. that in 6 weekes time will cure the Kings Evill perfectly. . . .

"The perfect Composition of the weapon Salve for 2sh. 6d. an ounce, that cures any wound cureable, being applyed to the weapon.

"A Sympathetical Powder, that will doe in all things the same; being a preparation of Vitriol.

"A Sympathetical Quintessence, for 5sh. a dram, that being dropped into the Urine (while it is yet warm) every morn, and then set on embers to evaporate, will heal all Ulcers in the Reins or Bladder, and dissolve the Stone in short time.

"*All these Medicines have been often proved.*"

The evolution of what is now known as the displayed advertisement—i.e., the advertisement that is in some way detached from the surrounding items—can be clearly traced within the first few years of the commencement of Press advertising. Towards the close of the year 1652 the printer of "Severall Proceedings in Parliament" began to give his paper's advertisements the appearance of having been inserted as integral items, as blocks are now placed. The fact that the type was smaller than that of the news paragraphs was a contributory but not an important factor, for it happens that in one and the same issue of that decade are often to be seen sudden transitions from one size of type to another, probably for reasons connected with the stock of the printer or the diligence of the compositor. A lozenge-maker adorned his announcement in "The Faithful Scout" of May 18-25, 1655, with a

For Sale by the CANDLE,

AT Garraway's Coffee-Houſe in Exchange-Alley, on Thurſday the 9th inſtant, at Four o'Clock in the Afternoon, the following Goods, viz

343 Pieces of brown Cloth, } Being the Goods ſaved out of the
69 Remnants of ditto, } Anne-Katherine, John Helgerlogh,
110 Pieces of Heſſians, } loſt near Dunkirk,
12 Pieces of black Italian wrought Silks, in Time,
66 Serons and 1 Box of Jeſuits Bark,
1 Caſk of Aloes Succotrina,
1 Cheſt of Benjamin,
19 Bales of Iſinglaſs,
4 Boxes of refined Camphire,
2 Caſks of Sal-Armoniac,
21 Bales of Cummin Seeds,
10 Ditto of Anniſeeds,
37 Caſks of Cacao Nuts,
16 Tubs and 14 Cheſts of Camphire,
20 Bags of Turmerick,
100 Sticks of yellow Saunders, } lying in the Company's
50 Ounces of Bezoar, } Warehouſes,
4 Cheſts of Bohea Tea,
60 Bales of Coffee,
40 Bottles of Aqua Fortis,
17 Butts of Argol,
16 Caſks of Gum Seneca,
22 Caſks and 2 Serons of Spaniſh Indigo,

The aforeſaid Goods (excepting thoſe lying in the Company's Warehouſes) to be ſeen from Monday next to the Time of Sale, at the following Places, viz. the Argol and Gum, at Mr. Cox's Warehouſes in Bi liter-Lane; the Cacao Nuts, at No. Z. Z. Z. in the Steel-Yard; and all the other Goods, at No. 17 and 18, at Dyers Hall, Thames-Street.

Samuel Torin, *Broker.*

For Sale by the CANDLE,

At the Marine Coffee-Houſe in Birchin-Lane, Cornhill, on Wedneſday next, the 8th inſtant, at Five o'Clock in the Afternoon,

THE entire Stock in Trade of Mr. WILLIAM GEREE, Druggiſt, in the Hay-Market, conſiſting of

Drugs,
Chymicals,
Galenicals,
Utenſils,
A few Lots of Grocery.

Catalogues of which will be timely deliver'd by

Edward Taylor, *Broker, in Tower-Royal.*

For Sale by the CANDLE,

AT the Marine Coffee-Houſe in Birchin-Lane, on Wedneſday the 1ſt of Auguſt next, the following Goods, viz.

Several Cheſts of Manna,
6 Jars of Oil of Roſemary,
Several Caſks of Colocynth,
3 Cheſt of Cantharides,
4 Bags of Diptimus,
2 Caſks of Oil of Bays,
Several Bales of fine Anniſeeds,
2 Bags of French Saffron,
10 Caſks of Roman Vitriol,
5 Bottles of Aqua Fortis,
1 Cheſt of Sugar of Lead,
3 Schaffes of Gum Arabick,
2 Caſks of Sal Armoniack,
2 Caſks of Cochineal,
Several Bags of Saltpetre,
600 Dozen of chip Hats,
A Parcel of Verdigreaſe,
And ſundry other Goods.

Catalogues will be timely diſpers'd by

William Homer, *Broker.*

TWO ADVERTISEMENTS (below) OF AUCTION SALES OF DRUGS IN 1744, GIVING THE PRINCIPAL ITEMS, AND (right, above) ADVERTISEMENT OF SALE OF A DRUGGIST'S STOCK-IN-TRADE

Burney Collection, British Museum

device (reproduced on p. 833) resembling a coat of arms; and in its issue of June 17-24, 1658, "Mercurius Politicus" published an advice enclosed in an ornamental frame. Incidentally, the first Press use of the word "advertisement" in the modern sense occurs, so far as we are aware, in the "Perfect Diurnall" near the end of the year 1654 (page 3990).

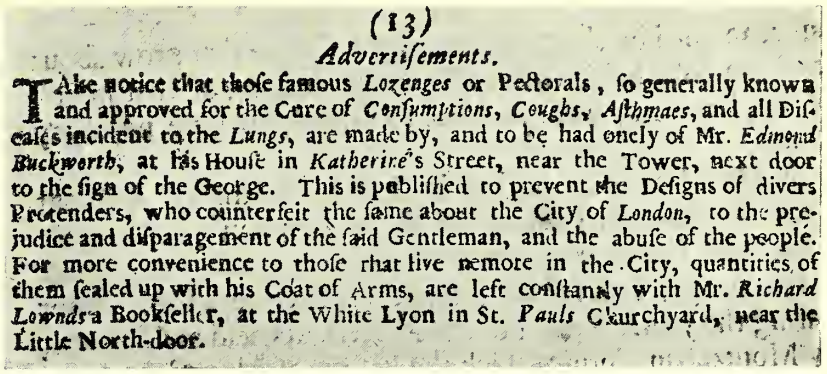
Before we proceed to examine more closely the contents of some of the business announcements of 1652-1800—roughly a span of a century and a half—we may put them in a truer perspective by pointing out the relatively slow increase in the recognition of regular advertising by traders of all kinds. For the generality of newspapers the number of advices appearing in any one issue (up to the latter part of the eighteenth century, at any rate) seems to have been a matter of pure chance. In 1653 a journal had on one occasion a whole page (measuring about six inches by five) allotted to its eleven trade announcements; but usually such paragraphs were limited to three or four, and sometimes they were absent. To the exponents of this policy—if the modern word is permissible—there were a few exceptions. "The City Mercury," an advertising medium founded in 1675, was one; another, possibly better known, was "A Collection for Improvement of Husbandry and Trade," started in 1692 as a single folio sheet by John Houghton, F.R.S., an apothecary. Houghton's paper appeared twice a week, and the greater part of the front page was occupied by scientific disquisitions, news being relegated to footnotes. Half of No. 52, which number was expanded to four pages, consisted of advertisements; but Houghton was not quite easy in his mind, for in No. 69 he remarked, referring to this part of the paper:—"Pray mind the Preface to this half Sheet. Like Lawyers I take all Causes I may fairly; who likes not may stop here." In the index to his third volume, however, he recommended certain offers by marking them with an asterisk; and about the same time he even put various goods on sale "for a friend." The very different attitude of "The London Gazette" was made clear in its issue of June 14-18, 1666:—

"An Advertisement. Being daily prest to the Publication of Books, Medicines, and other things, not properly the business of a Paper of Intelligence. This is to notifie once for all, that we will not charge the Gazette with Advertisements, unless they be matter of State; but that a Paper of Advertisements will be forthwith Printed apart, and recommended to the Publick by another hand."

A similar notice appeared in "The Current Intelligence" almost simultaneously. (As a matter of fact, "The London Gazette" continued to admit advertisements occasionally, possibly as a favour, for several years.) That the systematic use of what twentieth-century experts often prefer to call publicity was for some time regarded as more or less eccentric is suggested by a brief obituary notice of a certain Alexander Emmerton in the "Daily Post" of September 9, 1737: he is referred to as "the Advertising Colour-man." (Richard Stoughton had expressly deprecated, in 1711, the necessity of advertising.) However, a few proprietors of medicines believed in making their claims known through the Press: as far back as 1693 a certain J. Peachy remarked, while setting forth the benefits of his Purging Pills ("The Athenian Mercury," November 18):—"Many ill Men make it their Business to reproach this Publick way of practice, because it thwarts their Private Interest." Ultimately we reach a date at which it was considered good form for a respectable tradesman to announce what he wanted to sell; in the "Morning Chronicle" of December 26, 1782, the proprietor of Speediman's Stomach Pills burnt his boats in the following terms:—

"It has become the necessary custom of the times that medicines even of the most approved effects, should be regularly held up to public, and the candid public of course solicited for their generous countenance to such of them as deserve it."

About this time, then, the "age of advertisement" (the phrase is the late Lord Rosebery's) may be said to have commenced. It remains for us to classify as well as we can the abundant material that the years 1652-1800 supply.



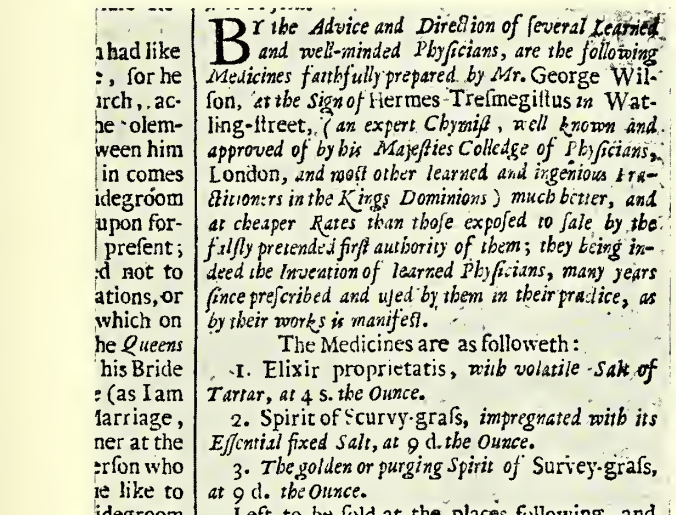
(13)

Advertiſements.

TAke notice that thoſe famous *Lozenges* or Pectorals, ſo generally known and approved for the Cure of *Conſumptions*, *Coughs*, *Aſthmaes*, and all Diſeaſes incident to the *Lungs*, are made by, and to be had onely of Mr. *Edmond Buckworth*, at his Houſe in *Katherine*'s Street, near the Tower, next door to the ſign of the George. This is publiſhed to prevent the Deſigns of divers Pretenders, who counterfeit the ſame about the City of *London*, to the prejudice and diſparagement of the ſaid Gentleman, and the abuſe of the people. For more convenience to thoſe that live remote in the City, quantities of them ſealed up with his Coat of Arms, are left conſtantly with Mr. *Richard Lownds* a Bookſeller, at the White Lyon in St. *Pauls* Churchyard, near the Little North-door.

ONE OF THE EARLIEST ADVERTISEMENTS OF AN ARTICLE FOR WHICH PROPRIETARY RIGHTS WERE CLAIMED

From "Mercurius Politicus," November 11-18, 1652 *Burney Collection, British Museum*



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BY the *Advice and Direction of ſeveral Learned and well-minded Phyſicians, are the following Medicines faithfully prepared by Mr.* George Wilſon, *at the Sign of* Hermes Treſmegiſtus *in* Watling-ſtreet, *(an expert Chymiſt, well known and approved of by his Majeſties Colledge of Phyſicians*, London, *and moſt other learned and ingenious Practitioners in the Kings Dominions) much better, and at cheaper Rates than thoſe expoſed to ſale by the falſly pretended firſt authority of them; they being indeed the Invention of learned Phyſicians, many years ſince preſcribed and uſed by them in their practice, as by their works is manifeſt.*

The Medicines are as followeth:

1. Elixir proprietatis, *with volatile Salt of Tartar, at* 4 s. *the Ounce.*

2. Spirit of Scurvy-graſs, *impregnated with its Eſſential fixed Salt, at* 9 d. *the Ounce.*

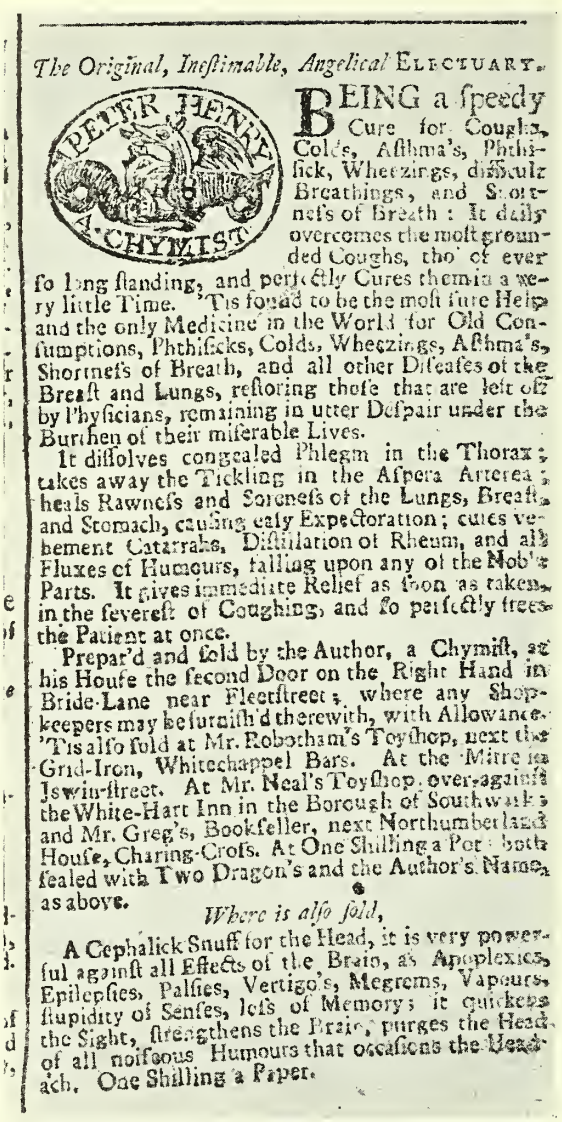
3. *The golden or purging Spirit of* Survey-graſs, *at* 9 d. *the Ounce.*

Left to be ſold at the places following, and with ſeveral others in and about *London.*

At Mr. Henry Morclack's *Shops, the* Whiteheart *in* Weſtminſter-hall, *and the* Phœnix *in* Pauls Church-yard, *Mr.* Kunhoults *at the* Kingshead *over againſt the* Muſe, *Mr.* Starkey's *at the* Mitre *within* Temple-Bar, *Mr.* Bateman's *at the* Bible *over againſt* Furnivals-Inn, Holborn, *Mr.* Clark's *at the* Bible *and* Harp *by the* Hoſpital-gate Smithfield, *Mr.* Hornes *at the South-entrance upon the* Royal Exchange. *Mr* Paſſinger's *at the three* Bibles *on* London-bridge; *all Book-ſellers.*

ONE OF THE PRESS ADVERTISEMENTS OF GEORGE WILSON, OF AQUA MELLIS FAME (PARTICULARS ABOUT WHOM WERE GIVEN IN "THE CHEMIST AND DRUGGIST," 1926, II, 96-98)

From the "True News" of March 6-10, 1679-80



THE FIRST KNOWN ADVERTISEMENT COMBINING SEAL, NAME OF ADVERTISER AND THE WORD "CHYMIST"

From the "London Journal," January 19, 1733-34
Burney Collection, British Museum

Chemicals and Chemical Medicines

The first advertisement of medicines exclusively of chemical origin, to be found in the "Mercurius Politicus" of April 15-22, 1658, is a reminder that the introduction of these medicines was bitterly opposed by the Galenists, who issued pamphlets decrying them. It sets forth that in Bread Street (the thoroughfare, by the way, in which Milton was born) "usual Medicines, prepared by the Art of Pyroteckny (according to the Doctrine of Paracelsus and Helmont)" are to be had "at the Sign of the Bores-Head over against the Naked Boy"; and it includes a fling at the Galenists, whose "incurable" diseases, as they accounted them, are specially warranted curable.

About this time a tradesman in St. Paul's Churchyard got himself into trouble by the unauthorised use of Robert Boyle's name in connection with certain "chymicall medicines." The advertisements, taken from two successive issues of "The Intelligencer" in January 1663/64, speak for themselves:—

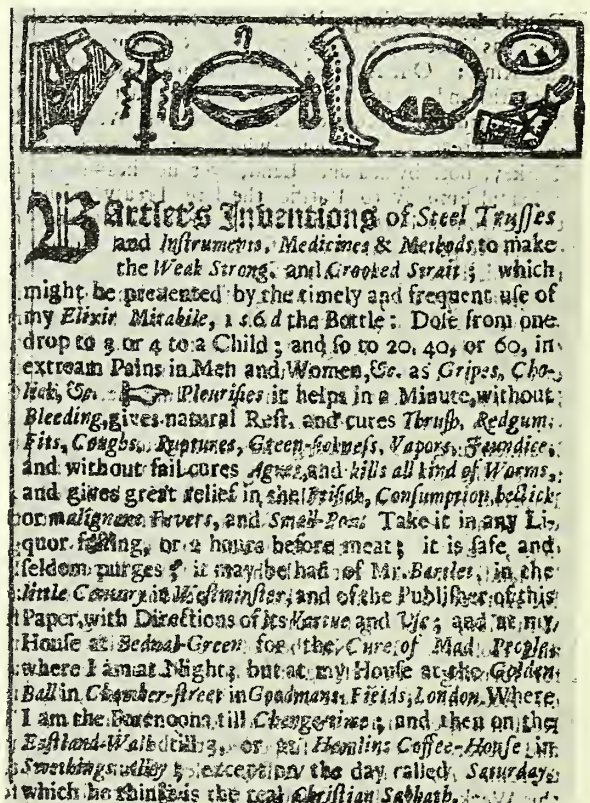
"Choice Chimicall Medicins mentioned by the honourable, and incomparably Learned *Robert Boyle* Esquire in his Books, are placed in the hands of *Octavian Pulleyn* Junior, at the Bible in St. *Pauls* Church-yard to be disposed of."

"Whereas at the desire and Instance of *Octavian Pulleyn junior* . . . It was publish'd in the Last Weeks *Intelligence*, that Certain Choyce *Chymicall* Medicines mentioned in the Books of the Honourable *Robert Boyle*, Esq; are placed in the Hands of the said *Pulleyn* to be disposed of: He the said *Octavian Pulleyn* desires to Explaine himself, that the Honourable Mr. *Boyle* was utterly a Stranger to the whole Proceeding: (being a Person, to whose Condition, and Inclination, all private Interests are extremely unsuitable) and that the said Medicines belong to an Excellent *Chymist*, who prepares them very skilfully, and would not consent to this way of Exposing them; but to gratify Divers Considerable Persons that both need, and desire them."

The methods adopted for directing the minds of newspaper readers to a maker's own product to the exclusion of similar ones were often ingenious, and occasionally more forthright than would now be allowed by editors. Here, for example, is a soapmaker's manifesto in 1679 ("The True Domestick Intelligence," December 2):—

"Whereas one *Deval* has spread abroad a report in commendanion [*sic*] of his *Sope;* be pleased to take notice, that as touching the goodness and substantialness of *Sope*, either White or Coloured, there cannot be better in the World than what is made by *Timothy Cox* . . . whose proper imployment it is, and not *the Seale-makers.*"

The growing popularity of spa waters from Restoration days onwards is reflected in the introduction of various saline remedies. In 1697 Hemming, an apothecary "at the 2 Mortars and Pestles, St. Martin's-in-the-Fields," advertised "Sal Catharticum Amarum Hemmingii" at 1s. per oz. Almost simultaneously the "Post



AN EARLY ILLUSTRATED ADVERTISEMENT

From the "English Post," July 2-4, 1701
Burney Collection, British Museum

Dr. STEERS's MEDICINES.

SOLD by H. STEERS, at his Medicine Warehouſe, No. 10, Old Bond-ſtreet, on the Left Hand from Piccadilly, three doors from Stafford-ſtreet, viz.

OIL FOR CONVULSIONS in Children, &c, which by outward application will generally remove the fit in a few minutes, and taken inwardly will prevent returns. Numbers of children have been almoſt inſtantly relieved by this medicine, after lying in fits for ſeveral hours. It is equally efficacious in complaints of the ſtomach and bowels. Price 2s. 3d. the bottle.

NITRE DROPS for Fevers, Colds, ſore Throats, &c. 2s. 3d. the bottle.

SOLUTION OF MYRRH for Female Complaints, for the Gravel, Stone, and all Chronic Diſorders, 10s. 6d. the bottle.

OPODELDOC for Rheumatiſms, Sprains, Bruiſes, Chilblains, &c. 1s. 9d. the bottle.

☞ Alſo may be had at the above Warehouſe,

Dr. James's Powder	2 6	Glaſs's Magneſia	3 0
Analeptic Pills	4 6	Turlington's Balſam	1 9
Dalby's Carminative	1 6	Eſſence of Peppermint	1 0
Hooper's Pills	1 0	Greenough's Tinctures	1 0
Engliſh's Scots Pills	1 6	Ditto Lozenges	1 0
Daffy's Elixir	1 3	Balſam of Honey	3 0

And moſt of the other Genuine Medicines of Repute, procured from the proprietors.

ONE OF THE ANNOUNCEMENTS OF H. STEERS, A REGULAR USER OF SPACE IN THE PRESS

From the "Morning Chronicle," January 6, 1785
Burney Collection, British Museum

Boy" had a general announcement of "Tinctura Cathartica: or a Tincture of the Salt of Epsom" at 1s. for a 3-oz. bottle and "the Salt truly prepared" at 14s. per lb., which were sold at eight town and thirteen country addresses. Elixir Polychrestum was announced in 1700 by a chemist in Alia Street; and in 1768 the invention of a product advertised as "Epsom Magnesia" was attributed to one D. Ingram.

The vogue of tar water was, naturally, reflected in more than one high-flown eulogy of its properties. In the "Daily Advertiser" of May 23, 1744, it was extolled in five separate advertisements. (A specimen of such advertising is shown on p. 834.) It would almost seem that the vogue was too intense to last. At any rate, in the "Daily Post" of the following August 7, we read "The run of Tar Water being over"; this is part of an announcement of "Better Waters than Tar Water." Eventually, in the "General Advertiser" of August 20, 1747, we come to an offer of "Genuine Acid Juice of Tar," which probably indicates, or anticipates, a public desire for something new.

Drugs and Galenical Medicines

As the liquorice plant was at one time extensively grown in England it is not surprising that the first two drug advertisements, appearing simultaneously in "A Perfect Diurnall" and "Severall proceedings in Parliament" in February 1652/53, have reference to "licquoras." In one of these the plants, possibly for cultivation, are offered at an address in Gracious (now Gracechurch) Street, where liquorice (root?) was sold at 12d., 9d. and 2½d. per lb. The other vendor sold his cheapest grade at 2d. and the Spanish sort at 3½d. per lb. Nearly thirty years later, in "The London Gazette" of October 18-22, 1682, a collective announcement appeared regarding "The Juyce of Liquorice of Paris and Blois rightly prepared . . . by Monsieur Guy, a French Apothecary"; and in the next issue but two the world was informed that "The Troches, or Juyce of Liquorice of Blois" were prepared and sold by Monsieur Angiband, late of Paris, Apothecary, at his shop in St. Martin's Lane. One other liquorice advertisement has features that distinguish it from several of its kind:—

"These are to give Notice, That Mrs. Painer, who does prepare the Juice of Liquorish, black, brown and white . . . and who has the Honour to prepare the same for her Royal Highness the Princess of Denmark . . ."

This appeared in "The London Gazette" in February 1689-90.

Cinchona, which received the qualified approval of Sir Thomas Browne (*C. & D.*, 1923, I, 935), appears to have been in steady demand from the time of the first announcement of "Jesuits Powder" in 1658 (see p. 829). From a comparatively early part of the eighteenth century till the practice died out, drug auctions or sales "by the candle" were given detailed preliminary notice in the newspapers; and the drugs on sale frequently included "Jesuits Bark." Two of these auction notices are reproduced on p. 834. An interesting feature is that Houghton, in his Collection (No. 198), offered "three or four sorts of very good Jesuits Bark," indicating that as early as 1696 more than one species of cinchona was known commercially.

Many of the advertisements of drugs and galenicals in the seventeenth and eighteenth centuries are more remarkable, perhaps, for their diction than for the products introduced. The by-play of two rival vendors of linseed oil, in the "Post-Man" and the "Post Boy" respectively, in 1707-08, has a freedom



ONE OF SEVERAL CARICATURES PUBLISHED AS SATIRES ON SIR JOHN HILL, M.D., WRITER ON "BOTANICAL MEDICINE," JOURNALIST AND PROPRIETOR OF NOSTRUMS

British Museum

refreshing in our more restricted times:—

"The right new Cold drawn Linseed Oyl, which is so famous for the Distempers following . . . at the Rainbow Coffee-house at Fleet-bridge, at 2s. a Pint, and no where else so good cheap."

"Whereas the Author J. L. who draws the right cold Linseed Oil . . . hath removed it from the said Coffee house [Rainbow] . . . Whereas the Coffee-man of the abovesaid Coffee house pretends still to sell the new cold drawn Oil . . . Note, that he gives it a scurvy Commendation. for this sort of Oil is no more fit for present use, than Beer brew'd one hour is fit to be drank the next. . . ."

Many side-lights on the customs and beliefs of past days emerge from a systematic reading of Press advertisements. We learn, for instance, that in 1682 a drysalter "near St. Antholin's Church" (close to the old Cannon Street offices of THE CHEMIST AND DRUGGIST) had caused such a rise in the price of red sanders wood that users of this article were requested to refrain from buying; that in 1696 "Casheu or Catecheu, excellent against Rheums and bad Breath, if dissolv'd in Mouth," was obtainable "at 18d. the Box"; and that chemists sold tapioca in the latter part of the eighteenth century as "a very nutritious and powerful Restorative Medicine" at 2s. per lb. In 1699 a surgeon advertised "Papers of Ingredients to make a Diet-Drink . . . at *Eighteen Pence* each Paper, with Directions," an early form, no doubt, of the packets of ingredients for compound decoction of sarsaparilla familiar down to our own day. Some of the prices of galenicals strike one as high; thus, in 1757 Brotherton's Compound Solution of Myrrh was £1 1s. a pint.

Proprietaries

If, for the period we have selected, it is difficult to fix boundary lines between advertisements, news and propaganda, it is even more difficult to draw up a satisfactory definition of a proprietary. Let us begin at the beginning. The first entry to attract our attention is to be found in the "Perfect Diurnall" of April 4-11, 1653; it reads:—

"There is one M. *Playford* now resident in *Kingsstreet* in *Covent Garden* at one M. *Wells* his house, who (by Gods assistance) doth infallibly cure the diseases and infirmities hereunder specified . . . and such as live remote may have directions sent them how to cure themselves."

Less than two months later, in the same newspaper, we are told that he "hath also at all times ready specifical pils for 12d. a peice, to stay any defluxion . . ." And in May of the following year we learn that "Mr. *Isaack Playford*, Student and Practitioner in Physick and Chirurgery . . . can make the Antidote called *Orivetan*, so much renowned all over Europe, which is a remedy for most diseases."

We may next glance at three announcements which use the names of persons of quality as a selling point. The first is taken from the "Mercurius Politicus" of May 15-22, 1656:—

"It is desired to be made publick, That Monsieur Lewis Miquo hath long served Sir William Paston, Baronet; unto whom his Master, the said Sir William, hath given that most excellent and admired Receipt of the Plaister Unguent and Bath, which immediately taketh away the pains of the Gout, and strengthneth the Sinews."

Similarly, the "Mercurius Publicus" of March 5-12, 1662/63 tell us that "the Lady Marchioness of Monzebon," on returning to Spain, left all her remedies "in the hands of Mr. Foucans, the French Apothecary, in Bedford-street, Covent Garden." And the third example, from the "Daily Courant" of February 3, 1707/08, is inimitable in its candour—or cunning:—

"Horonato Fornello, Gent. no Physician, could hardly be perswaded to publish his Dissolution Salt . . . to be had of Mr. Thomas Dowse, Perfumer, . . . Grace-Church-street, London, and no where else in all England. Price 4s. the half Ounce, which is 8 Doses."

George Wilson's attitude to his own proprietaries varied. It is clear, from articles that appeared in our Special Issues of 1926 and 1927, that in at least one case he refrained for a time from advertising one of his nostrums, but that on the other hand he invited anyone interested to call at his laboratory and see any of his medicines "prepared from the beginning to the compleating of the same." An announcement of his in the "True News" of March 6-10, 1679/80 (reproduced on p. 835), shows that he appointed several shopkeepers as his agents. In 1682 ("The Loyal Protestant," September 26) he issued a sarcastic advertisement concerning "Elixir Salutis, commonly (but falsely) called Daffies Elixir . . . it being an Antient Receipt"; and on October 17, in the same paper, he stated that he had

MINERAL WATERS.

JOHN ELLISON begs leave to acquaint the Nobility and Public in general, that on the 1st of July, 1778, he purchased the lease of Mr. Davis's Mineral Water Warehouse, next the St. Alban's Tavern, in St. Alban's-street, Pall Mall, where he hopes for a continuance of their favours. On the 20th of the same month he purchased the lease of that excellent Mineral Water known by the name of Jessop's Well, situate on Stoke Common, near Claremont, Surry. On the 11th of January, 1779, he purchased the lease of that much approved Water, called Tilbury Alterative Water, situate at West Tilbury Hall, Essex. The characteristical marks of Tilbury Water are, its being of a straw colour and having an extremely soft, pleasant taste, like milk, which circumstances are particularly mentioned by Dr. Andree, Dr. Rutty, Dr. Monro, and other eminent Physicians. The excellency of this Water was first discovered in the year 1731, at which time there was no spring in the parish of Tilbury known to possess any medicinal quality whatever; though about twenty years after, waters of an inferior strength gradually crept into use. Dr. Andree, who is now living, has published four editions of his Treatise on the many virtues of Tilbury Water; the first in the year 1736, wherein are stated several cases in which this Water has been singularly serviceable. It was in such high repute in 1753, that Mr. Henry Godwin paid a yearly rent of 50l. for the Well alone. Its strength and medicinal qualities are amply set forth by Dr. Higgins, whose chemical abilities are well known, in his accurate analysis published in May 1779, which is as follows:

A Winchester gallon of Tilbury Water, filled at West Tilbury Hall, contains

	dwt.	gr.
Of calcarious earth, saturated with acidulous gas,	1	0
Of true nitre, with basis of fixed vegetable alkali,	3	0
Of sea salt,	3	1½
Of mineral alkali,	0	1
Of mineral oleaginous matter, about	0	1
	7	3½

Two quarts of acidulous gas, which is in denfity to temperate, atmospheric air, nearly as two to one, are contained in each gallon of this water, beyond the quantity of acidulous gas retained by the calcarious earth above-mentioned, in the heat of boiling water.

On the 22d of September, 1779, Dr. Higgins examined this spring, and has made the following report on the water taken up that day:

The Water at West Tilbury Hall, which I sealed at the Well on the 22d of September 1779, contains in each Winchester gallon

	dwt.	gr.
Of calcarious earth, saturated with acidulous gas,	1	13
Of true nitre,	2	1
Of sea salt,	3	10
Of mineral alkali,	0	1½
Of mineral oleaginous matter, by eſtimation,	0	1½
	7	2½

N. B. A great part of this calcarious earth would subside in a little time, by keeping the water in open veſſels; and the quantity of acidulous gas is nearly as the quantity of calcarious earth, in the different analyſis.

ERY. HIGGINS.

Greek-ſtreet, Soho,
Oct. 11, 1779.

The firſt and ſecond analyſis ſo nearly correſponding, is a convincing proof of the ſuperiority of this Water to that which Dr. Higgins bought of Mr. Owen, in Fleet-ſtreet, the 4th of May laſt, filled at the Rector's Well, which, by the analyſis, he found to contain little more than half the quantity of the ſame medicinal ingredients.

To prevent future impoſitions, all bottles filled at this ſpring will be ſealed with an impreſſion of the words, West Tilbury Hall; of which the public are reſpectfully adviſed.

A SCIENTIFIC ADVERTISEMENT OF JOHN ELLISON, WHO GAVE DETAILS OF THE COMPOSITION OF MINERAL WATERS IN THE "LONDON EVENING POST," NOVEMBER 18-20, 1779

Burney Collection, British Museum

made the elixir in "64 and 65 . . . several years before Mr. Daffy either pretended to this or any other Medicine." Wilson was then carrying on business in Watling Street, "within four doors of Bow Lane"; later, in association (or possibly in partnership) with his son, Edward Wilson, he lectured at "the Sign of Hermes Tresmagistry" in Long Acre. By this time (1699) the first edition of his "Compleat Course" was in print.

With the advent of the eighteenth century, we get the first definite mention of a proprietary as a remedy the composition of which is not disclosed. In the "Daily Courant" of March 4, 1703, we read:—

"John Hill, Apothecary in Watling-street near Friday-street, having prepar'd a secret and useful Plaister and Oyntment . . . [for drawing better than "common Blisters, Issues, or Seatons"]. The Same is to be had at the Author's House as above, and no where else. price 2s. 6d."

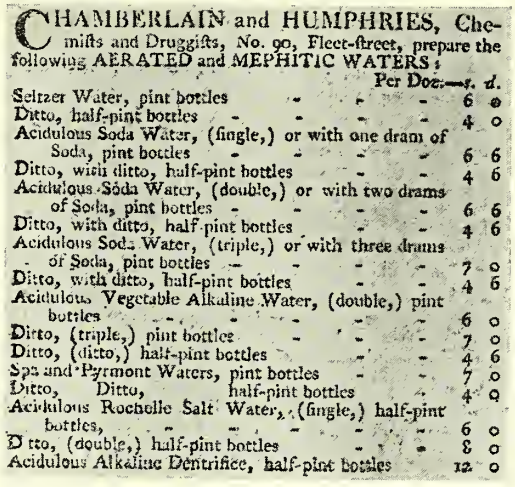
One other type of proprietary advertisement may be noticed in illustration of the difficulty of definition to which we have referred. We have seen that in 1663/64 a tradesman in St. Paul's Churchyard had to issue a kind of apology for the unauthorised use of Robert Boyle's name. For some reason, lozenges for lung troubles continued to be sold bearing, so far as we can judge, an equally unwarranted reference to their putative originator. We find this type of announcement in 1695 ("The London Mercury," December 30), and again in 1707 ("Post-Man," October 2-4); in the former instance eleven shops at which the lozenges were obtainable are mentioned, and in the latter six, comprising two booksellers', a stationer's, a tinman's, a hosier's and a cane-shop. The frequent occurrence of the names of printers and stationers as vendors of proprietaries is explained by their taking payment for advertisements wholly or partly in kind.

This wide distribution of trades adopting proprietary remedies as a side-line leads us to the subject of quackery, which may be regarded as the extreme left of the proprietary-medicine trade. In the "London Post" of August 13-15, 1701, appears the following vigorous pronouncement:—

Whereas a Metallick Virtuoso, (converter of old Iron into Cheshire Cheese) lately of Black-Fryars, imprudently made use of the Navy Surgeons Name in publick Print, to recommend his Vitriolick or Fever-bullying Elixer to the World, this is to acquaint him . . . that they are not so much in love with the last Quack-Medicine recommended to them, as to incourage this of his. In the Name of the Navy Surgeons, Spithead, Aug. 12th, 1701. W. Harris."

In 1756 a letter appeared in the "Public Advertiser" (February 6) warning the public, not without reason, against "toyshop medicines, whether by Patent or otherwise": in the same way, a correspondent of "The Morning Post" of December 16, 1782, remarked that "A person cannot walk from St. Paul's to Temple Bar, without having a dozen different quack-bills thrust into his hands."

We may next notice, in chronological order, a few proprietary advertisements distinguished from the generality by salient features. In 1665, when the Great Plague was raging in London, a notice was inserted in "The Intelligencer" (June 26), ostensibly from "the President and College of Physitians of London" recommending as an antidote their Spiritus Antiloimoides, sold by William Johnson, apothecary and chemist to the College. (An unusual announcement of medicines for the plague appeared in the same newspaper on July 24, commencing "Whereas Thomas Williams of the Society of rare and well meaning Chymists, hath prepared . . .") Another link between medicine and pharmacy is to be found in the cordial ("The Loyal Protestant," October 5, 1682) "only prepar'd by Doctor William Jones (Chimist in Ordinary to His Majesty) at his House. . . . Vials of it (containing one Ounce and three Quarters. Seal'd up with Papers of Instructions) are to be had at most of the Barber-Chyrurgeons . . . 9s. 6d. the Vial."



CHAMBERLAIN and HUMPHRIES, Chemists and Druggists, No. 90, Fleet-street, prepare the following AERATED and MEPHITIC WATERS;

	Per Doz.—s.	d.
Seltzer Water, pint bottles	6	0
Ditto, half-pint bottles	4	0
Acidulous Soda Water, (single,) or with one dram of Soda, pint bottles	6	6
Ditto, with ditto, half-pint bottles	4	6
Acidulous Soda Water, (double,) or with two drams of Soda, pint bottles	6	6
Ditto, with ditto, half-pint bottles	4	6
Acidulous Soda Water, (triple,) or with three drams of Soda, pint bottles	7	0
Ditto, with ditto, half-pint bottles	4	6
Acidulous Vegetable Alkaline Water, (double,) pint bottles	6	0
Ditto, (triple,) pint bottles	7	0
Ditto, (ditto,) half-pint bottles	4	6
Spa and Pyrmont Waters, pint bottles	7	0
Ditto, Ditto, half-pint bottles	4	0
Acidulous Rochelle Salt Water, (single,) half-pint bottles,	6	0
Ditto, (double,) half-pint bottles	8	0
Acidulous Alkaline Dentrifice, half-pint bottles	12	0

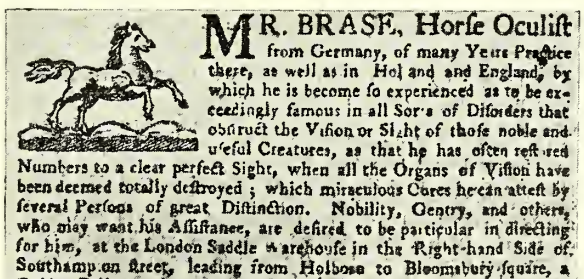
AN ADVERTISEMENT FROM "THE TIMES," AUGUST 12, 1800, INDICATING THE BEGINNINGS OF THE AERATED WATER TRADE

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In striking contrast to these two decorous statements comes one ("The London Post," September 15-18, 1699) of the cut-and-thrust order:—

"Whereas Mr. Garway, Fruiterer, at the S. Gate of the Royal Exchange, has falsly and maliciously insinuated by Advertisement . . . that the famous Issue-Plaister, mentioned in former Advertisements to be sold by him did not answer the end proposed: These are to certify, that the said Plaister not only answers the proposed end, as many Persons of better integrity than the said Garway have experienc'd for many years, but also surpasseth any that Counterfit can pretend to; and that the only reason why the Author of the really famous Issue-Plaster removed them from his Stall . . . was first, because Garway made shuffling Payments; and secondly, because he was assured that he used to counterfeit such Preparations as were left with him for sale. . . . He serves Mr. Stoughton, the Author of the Elixir Stomachicum the same Trick."

Truth in advertising appears to have been practised as early as 1702. Thus, a Syrupus Catarrhalis—the familiarity of people who could read with Latin titles appears to have been taken for granted—is recommended ("The London Post," January 2-5) in the following terms:—"In an old Ptysick, or Consumptive Cough, I dare not Warrant it; but in a Cough or Cold newly got . . . Price 2s. 6d. the Bottle. There is not one Grain, or Drop of any Opiate in it." About this time cordials had something of a vogue. The advertisement of "The Merry Cordial, singular for the Cure of the Hippo-Vapour, or Melan-



MR. BRASE, Horse Oculist from Germany, of many Years Practice there, as well as in Holland and England, by which he is become so experienced as to be exceedingly famous in all Sorts of Disorders that obstruct the Vision or Sight of those noble and useful Creatures, as that he has often restored Numbers to a clear perfect Sight, when all the Organs of Vision have been deemed totally destroyed; which miraculous Cures he can attest by several Persons of great Distinction. Nobility, Gentry, and others, who may want his Assistance, are desired to be particular in directing for him, at the London Saddle Warehouse in the Right-hand Side of Southampton street, leading from Holbone to Bloomsbury square, a Golden Ball over the Door; and they shall be waited on upon short Notice.

A QUAINTLY WORDED ANNOUNCEMENT OF AN UNUSUAL TRADE OR PROFESSION

From the "Public Advertiser," July 14, 1758

Burney Collection, British Museum

choly " in the issue of Defoe's Review for December 5, 1704, is noteworthy for a curious anticlimax: " Sold at . . . and no where else, at 10s. the Gallon. It is sold in penny Glasses."

Passing to the latter part of the century, we come upon the disturbance caused by the first Medicine Stamp Act. Thus, we find Mr. Francis Newbery advertising (" Morning Chronicle," January 8, 1785) that he is advised he has a right to continue to sell medicines unstamped, and giving, in tabular form, the following selection with prices:—Dr. James's Powder and Cattle Powder, Freake's Tincture of Bark and Powder of Bark, Greenough's Tinctures and Tolu Lozenges, Ormskirk Medicines, Hooper's Pills, Dalby's Carminative, Stomachic Lozenges, Turlington's Balsam, Steers's Opodeldoc, Nitre Drops, Oil for Convulsions and Cholic Elixir, Glass's Magnesia, Balsam of Honey, Norton's Drops, Inglish's Scots Pills, Essence of Peppermint, Grant's Drops, and James's [Analeptic] Pills, all, except the last-named, unstamped. A similar list, issued by Pearce's Medicine Warehouse, 19 Cornhill, and headed " No Duty on Medicines," appeared in the same paper about eighteen months afterwards. Steers, one of whose announcements is reproduced on p. 838, was a third advertiser on the same lines.

Before we pass on, two clever ideas may be recorded. One is to be found in the " London Chronicle " of June 15-18, 1785 (and subsequently in the " Morning Chronicle "), in the course of an eleven-inch advertisement of James's Powder: it takes the form of a recipe:—

Of Dr. James's Fever Powder
And prepared crab's eyes,
Six grains each, well rubbed together.

The Draught.

Of nutmeg-water two drachms,
Spring-water an ounce and a half,
Laudanum 14 drops and a little syrup mixed.

The other occurs in one of Francis Spilsbury's numerous advertisements: it consists of a testimonial from a customer who had purchased twenty-two 4s. 6d. bottles of Spilsbury's Drops for Scurvy and intended to continue the medicine a little longer as a precaution.

Last in order of time, but not least in interest, come the advertisements of Sir John Hill, M.D., who adopted the " Sir " in consequence of having been granted the Swedish Order of the Vasa. (There is no apparent connection between him and the John Hill of 1703.) The General Catalogue of the British Museum contains no fewer than six columns of entries of books and other publications by or connected with this remarkable man. Constantly involved in acrimonious disputes, he was thus engaged in 1752, when the caricature reproduced on p. 836 was published, and had just been publicly thrashed. Garrick launched at his expense the well-known epigram:—

For physic and farces, his equal there scarce is,
His farces are physic, his physic a farce is.

He died in 1775: twenty years later a ten-inch announcement in " The Oracle and Public Advertiser " (January 7), after reciting his attainments and the bequeathal of his Pectoral Balsam of Honey to his widow, continues:—

" It is with peculiar gratification that we find the Honourable Relict and Executrix of this deceased great and able Physician stepping from her retirement, and, whilst she dispenses the genuine Balsam after the true receipts, warning the Valetudinary of the base drugs held out for their destruction . . . Lady Hill's precaution of signing her name in red ink upon every bottle, we hope may in some degree authenticate the true Balsam, and check the daring frauds and cruelties of unprincipled empirics."

This medicine had a lengthy run: thus, in " The Times " of January 1, 1800, we read:—

" By Sir John Hill, M.D. . . . produced by the labour of an active life and vigorous understanding, spent in searching into the stores of the vegetable world . . . the hackneyed mode of recommending its use by cases of cure, which are frequently extorted by bribe, as incompatible with the character of Sir John Hill, who, as a Physician and Botanist, stamps real value on its intrinsic worth, and places its virtues beyond the reach of detraction. Gustavus the Third, King of Sweden, honoured him with a Letter, (accompanying it with the Royal Order of Sweden) . . . it is necessary for purchasers to observe the name of The Hon. Lady Hill, written on every label; and the direction signed Benj. Shaw." And, on January 17:—" The Linnæus of Britain (for such was Sir John Hill emphatically called) produced this Medicine by concentrating the virtues of that excellent Pectoral, Honey; . . . no Medicine was ever so universally counterfeited as this; and a few years ago, the wife of the Rev. Robert Fowler, of Peterborough, had nearly fallen a sacrifice to a spurious Balsam of Honey, sold by a Chemist and Druggist in London."

A final point in this section is the goodwill value of proprietaries. The only definite figures we have traced are contained in an offer in 1783 (" Daily Advertiser," March 7) of " the Recipe of two established Medicines " for £200, the profit from which medicines is stated to be £150 per annum. Somewhat more speculative is an announcement in the " Daily Post " of May 25, 1739, just prior to the purchase of Mrs. Steevens's Remedy for the Stone by Parliament. The anonymous " author " declares that he (or she) has " the Secret of a much more effectual Remedy," and that the turnover has been more than £700 in one year " at but 5s. the Paper." If there was any means of computing overhead charges in retail business in 1766, it would be possible to appraise the equity of the following offer (" Gazetteer and New Daily Advertiser," July 11):—" Wanted, A reputable ShopKeeper, near Charing Cross [and four others in different districts] to sell some advertised medicines, for which they will be allowed twenty per cent. . . ."

Preparations for the Teeth

Many and varied were advertisements of preparations for the teeth. Cures for the toothache, described as " an incomparable Secret " (" Post-Man," June 19-21, 1707) and sold by " a Gentlewoman " at her " Lodgings," or " The Famous Chymical Secret for the Tooth-ach " (Defoe's Review, December 12, 1706) were commonly advertised. " The TURKY-STONE for the TEETH " is mentioned in the " General Advertiser " of September 11, 1744, as " lately found out by a Gentleman travelling through TURKY," and from the illustration accompanying the notice appears to have been something in the nature of shaped pumice stone. Reference is made in the " Daily Courant " of November 18, 1707, to

" The Incomparable India Dentiffick Roots . . . 6d. each Root. This Root dipped in fair Water, and bruis'd with a Hammer, becomes a soft and pleasant Brush to the Teeth and Gums. . . ."

The wording of this announcement suggests an early example of the brushes we have known as Japanese tooth-brushes. In earlier days (" Kingdom's Intelligencer," May 26-June 2, 1662) dentifrices were apparently applied with the fingers or in any other way that might occur to the user, " and afterward wipe them [the teeth] with a fine cloth." The next stage in the evolution of our present-day shape of tooth-brush is outlined in the following phrases in the " Public Advertiser " of August 23, 1755: " take a Tooth Brush dipped in Water . . . and sometimes you may use the Sponge End of your Brush only." Eventually we come upon the expression (" Public Advertiser," May 2, 1781) " where Brushes for the Teeth may also be had," indicating an article in regular supply; and in 1784 (" Morning Herald," July 22) they were advertised as " from Indian hair and pattern " at 1s. each.

Dentifrices preceded " dentiffick roots " and tooth-brushes by a good many years. " Dentifrices to scour and cleanse the Teeth . . . invented and made by R. Turner " were available in 1660-61 (" Public Intelligencer," January 2-9): by the next year the inventor had discovered (" Mercurius Publicus," February 6-13) that " being beaten to powder, and taken a dram at a time in wine, or other convenient Liquor," they were a " speedy remedy for any Flux or Loosenesse of the belly." Passing to the last year of our period, we

find an equally confident claim ("The Times," May 3, 1800) concerning The Paraguay Tooth Powder and Lotion:—"The principal Ingredient in this excellent Powder is the Paraguay, from whence it takes its name. . . . But for it the Mines of Potosi must remain unexplored; for the mercurial vapours which arise are so . . . peculiarly prejudicial to the Teeth that the unfortunate labourers in those subterraneous mansions would soon become incapable of taking the food necessary for prolonging their wretched existence, were it not for this Vegetable."

Artificial teeth made their appearance before the end of the seventeenth century; for example, a French goldsmith in St. Martin's Lane claimed in 1696-97 ("Post-Man," February 25-27) that he had "found, by an experiment of 18 years, a certain way to fix Artificial Teeth in so firm a manner that one may chew with them." A few years later ("Flying-Post," June 7-10, 1707), a maker of dentures was more explicit:—"*John Watts,* Operator, sets in Artificial Teeth so firm as to eat with them, and so exact as not to be discover'd from Natural: They are a great Ornament to the Mouth . . . and not to be taken out every Night, as is by some falsely suggested, but may be worn Years together."

Perfumery and Toilet Articles

Although it is known that perfumes were in use from very early times, seventeenth-century Press announcements of perfumery in England are difficult to find. The earliest of any note that we have traced occurs in the "Post Boy" of January 15-17, 1697: it reads:—

"John Laurence, Italian, Perfumer, Removed to [an address in the Strand], has received . . . a parcel of the very finest Perfumes, and Spirits of Jesemy and Orange, and Spirits of Brigamot, and Pomatiums, Jesemy-Chocolet; . . . he hath Parmizant-Cheese, and other Oders. . . ."

In the days of full-bottomed wigs the wig, as well as the owner's hair, was perfumed. It is thus not surprising to read in Defoe's Review (August 12, 1704) of "The Royal Essence for the Hair of the Head and Perriwigs. . . . 'Tis indeed an unparalled [*sic*] fine Scent for the Pocket, and perfumes Handkerchiefs, &c. excellently." And in the same publication, a few months later, a periwig-maker recommended "The Golden Odoriferous Essence of Johannes Rosarius, M.D. & Philochym." To enter a theatre redolent of variously scented wigs must have been something of an ordeal. Hair dyes (black and dark brown) make their appearance in 1709; perfumery from Paris is not found till 1779; cold cream occurs (at a perfumer's) in 1783; and Bloom of Ninon in 1784. Sheridan's gibe in "The School for Scandal" about a certain lady's colour coming and going—"her maid fetches and carries it"—was not absolutely topical; for in the sedate "Spectator," as far back as July 23, 1711, we read, among the few announcements for which space was found:—

"The Famous Bavarian Red Liquor.

"Which gives such a delightful blushing Colour to the Cheeks of those that are White or Pale, that it is not to be distinguished from a natural fine Complexion, nor perceived to be artificial by the nearest Friend. Is nothing of Paint, or in the least hurtful, but good in many Cases to be taken inwardly. It renders the Face delightfully handsome and beautiful; is not subject to be rubb'd off like Paint, therefore cannot be discovered. . . ."

As the eighteenth century drew to a close, toilet preparations increased in number and, apparently, in expensiveness. Naples soap, for example, was in 1785 announced as reduced in price, at an Oxford Street royal perfumery warehouse, from 12s. to 10s. 6d. per lb., from which it may be inferred that the higher charge was more than customers cared to pay. In the following year matters were complicated by new stamp duties on perfumery and hair powder, duly announced in the Press by the Commissioners of Customs and Excise, and satirised in rhyme by Peter Pindar. Till then, hair powders had been sold at from 4d. to 5s. per lb. in fifteen tints and many perfumes; but the perfumery trade now began to show alarm. In the "Morning Chronicle" of April 11, 1786, we read that a Mr. Love, a Haymarket perfumer, "thinks it his duty to remind the public . . . the tax on hair powder and perfumery . . . will exceed his profits." A different method was adopted by a Strand perfumer named Sangwine, who advertised ("London Chronicle," October 26-28, 1786) "every article in perfumery over 8d. duty free." (Sangwine, by the way, sold "hard pomatum" at 1s. a roll.) Confirmation of the willingness of the public (or a section of it) to lavish money in this way is afforded by an amusing news paragraph in the "Gazetteer & New Daily Advertiser" of March 28, 1766, the writer of which thus expresses his dismay at the decadence of the period: "To such a height is the idleness and extravagance of the present age arrived, that there is actually a person at the West end of the town, who subsists by the new profession of paring the finger nails of ladies of fashion."

Bears' grease was extensively advertised, the usual method being the insertion of an announcement that a bear, or occasionally two bears, had been killed and were available for inspection. The following excerpt from the "Public Advertiser" of January 14, 1765, is of interest:—

"Bear's Fat . . . A Young fat Bear is killed, and is to be seen at R. Sangwine's, Perfumer, at the Sign of the Rose, No. 36, in the Strand . . . where any Lady or Gentleman may see the Fat cut off the Bear's Back at 2s. an Ounce; after which Time [three days] it will be melted, and put in Pots for Sale at the above Price: It is best to use Honey-Water with it, which may be had at the same Place. . . ."

After a time, these advertisements invited customers to send their servants to witness the process of excision—possibly a concession to growing humanitarianism. A footnote in the "General Advertiser" of July 3, 1771, "he has been fed on bread for three years past, by which means the fat is uncommonly fine," suggests that the fattening process was taken very seriously. So seriously, indeed, was the article as a whole regarded that a certain William Vickery published in 1785 an affidavit of the genuineness of his product sworn before the Lord Mayor.

The precise year in which the smelling-bottle began to displace the pomander in public favour is not easy to determine. Pomanders "according to the advice of the College of Physicians" at "12 pence a piece" were on sale in 1665, and one of these reputed antidotes against the Plague was said to be "prepared according to the former prescription of Dr. Thomas Clayton the Elder, Physician to his late Majesty, Professor of Physick in the University of Oxford" ("The Intelligencer," July 3). There may have been a transitional stage, for in the "Post Boy" of April 16-18, 1700, we read of "The Volatile Aromatick Salt, for the Pocket, of a most fragrant . . . scent, being wholly free from Musk, Civet, or any thing offensive to the Brain. . . ." No indication is given as to the material of which the container was made. By the last quarter of the eighteenth century, however, the smelling-bottle had become fashionable. "The Volatile Aromatic Salt" or "The Curious Smelling-Bottle" was the description frequently applied, and particulars as to use were often printed. Dalmahoy, "Chymist to Her Majesty," was one of the most regular advertisers, particulars of his smelling-bottle appearing in French of sorts as well as in English. Thus, in the "General Advertiser" of February 4, 1785, he occupied six inches on the subject of his "Bouteille de Senteur," the British shilling becoming "chelin" and half a guinea "une demi-guinee." (Incidentally, he had two other two-inch announcements on the same page.)

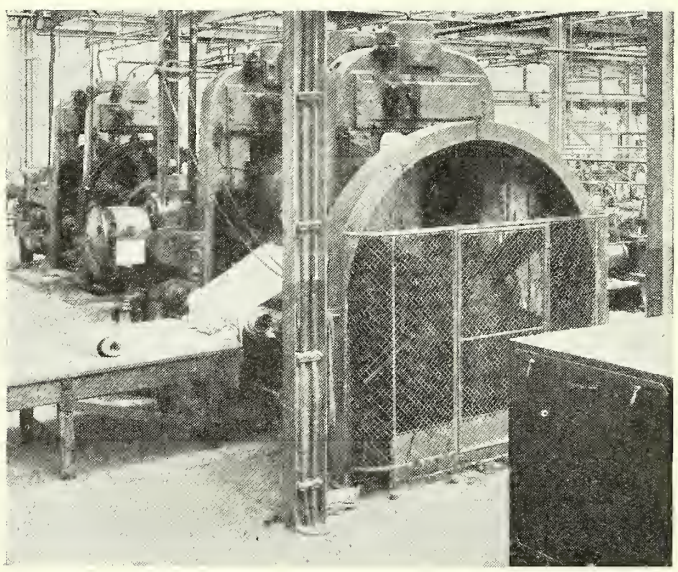
In an exact historical record details might have been given of the advertising of books, lectures, premises, situations vacant or wanted, venereal remedies, medicine chests and veterinary preparations. Some of these topics, however, either present no feature of outstanding interest or have been discussed occasionally in THE CHEMIST AND DRUGGIST.

Manufacture of Rubber Goods

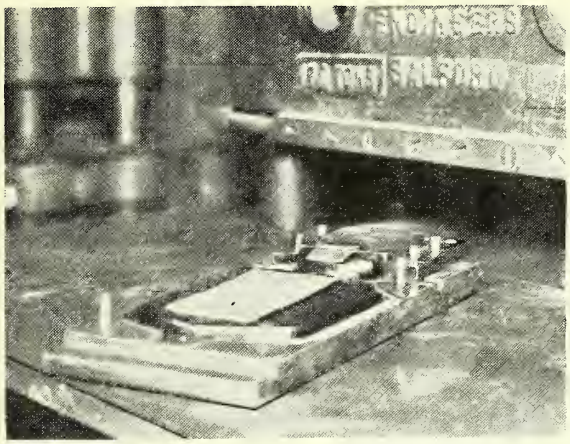
A Description of the Processes Involved in the Making of Some Surgical Sundries

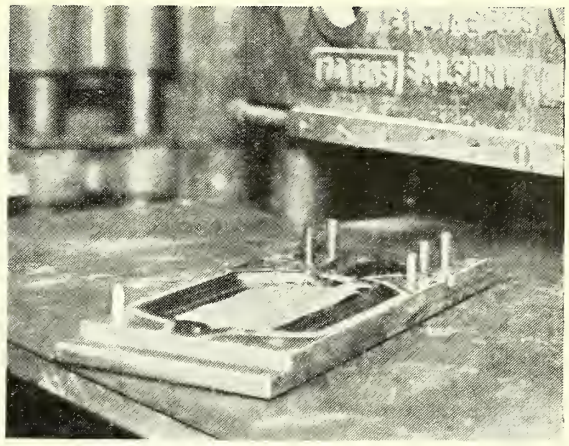
OF the five factories of The Leyland & Birmingham Rubber Co., Ltd., two are devoted to the manufacture of rubber surgicals, and these are situated well in the country, one being in the pretty little village of Mitcham, Surrey, and the other at Leyland, commonly known as the Garden of Lancashire. Each of the works specialises in one particular class of goods; Leyland in the heavy type, such as hot water bottles, bulbs and bed sheeting, and Mitcham in all dipped goods. By so splitting up the manufacture, these two distinct classes receive specialised attention, and the arrangement has resulted in a closer interest and inspection of the goods manufactured, problems being dealt with by a specialised staff. The company was founded some sixty years ago in a small way, and has gradually risen till to-day goods are shipped to almost every country of the world.

The company makes two kinds of hot water bottle. The first is the old type of fabric bottle, the second being the new moulded style. In the manufacture of the fabric bottle it first becomes necessary to mix a compound of rubber and the various pigments and ingredients on the giant mixing mills; after this compound has been mixed thoroughly and is of the consistency of putty, it passes through to the dough grinding department, where in naphtha it is let down to a treacly liquid to spread upon cloth. In the spreading department the compound is now applied coat upon coat on the fabric. In most cases the fabric has to pass through the machine as many as twenty-three times, each time receiving a thin layer of rubber. Naturally both sides of the fabric have to be coated in a similar manner so that the bottle will be waterproofed both inside and out. From the spreading department this rubber-coated fabric is passed on to the making up departments, where the shapes required in the make-up of the bottle are cut out by machine and taken to the operatives. From now onwards the fabric bottles are made by hand and from the various pieces the whole bottle is built up. The seams and channelling pieces necessary to make the joints are of the same rubber as the original compound, but have been forced to their shapes through the dies in extruding machines. These channel pieces may be seen around the edge of the bottle, and there is also another channel piece on the inside of the bottle. It is in this department that every bottle is stamped with certain figures and letters which indicate the date of manufacture and also the operative making the bottle, so that should any bottle be found faulty in use, it can be traced back to the time it was made, and the operative, and so the risk of further mistakes obviated. The bottle is now complete but yet unvulcanised. This operation is carried out in big pans charged with steam at a high pressure, and after a certain length of time under these conditions the process of vulcanisation is completed, the rubber once again regaining its elastic and resilient properties. The next process is the cleaning and labelling, following which it is packed, and is ready for despatch. The manufacture of the highly-coloured, glossy-surfaced moulded bottle is different. This type of bottle is manufactured in a high-speed steel mould, well polished to give the bottle the finished appearance it has. Starting now with the mixed compound the rubber is placed within a three-pieced mould consisting of the two outside pieces and a core, and the whole is then placed under steam heated presses. After a few minutes within the press the mould is lifted out, the two side sections removed and the bottle is left around the core. The bottle, now very hot, is removed from the core by stretching the neck to the full width of the bottle and sliding it off the core. When the bottle has cooled down the stopper section is fixed firmly in the neck, and after cleaning is ready for despatch. Bulbs are the next type of heavy articles used in the surgical trade, and these are made in a steel mould, although the process is very different from that of hot water bottles. There are two types of bulbs. Firstly the seamless bulb and secondly the ordinary bulb. In the ordinary bulb the rubber is run out into the form of a sheet and the requisite shape punched out on a special machine for the purpose. From these shapes a bulb is made up by hand roughly in its normal form, and, before sealing, special tablets are inserted within the bulb which during vulcanisation create gas. The steel mould used in the moulding process consists of two concave portions the shape of the bulb. The rough hand-made shape of bulb is placed within one section and then the second section is placed over the top of the first and the two securely clamped together. In course of vulcanisation when heat is applied the gas within the bulb, generated at pressure, expands to such an extent that it forces the bulb against the steel walls of the mould and therefore under the influence of pressure and heat the rubber is vulcanised to the shape of bulb required. When the



CALENDER AND BATTERY OF MIXING MILLS

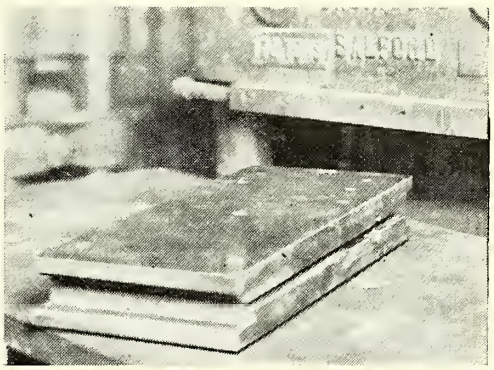


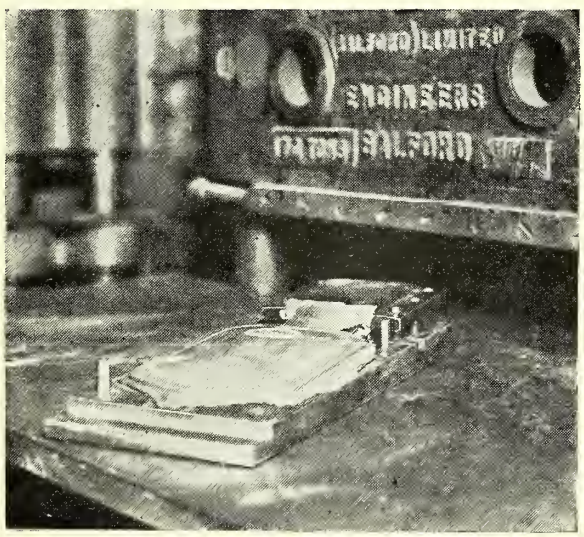


MOULDING A HOT WATER BOTTLE

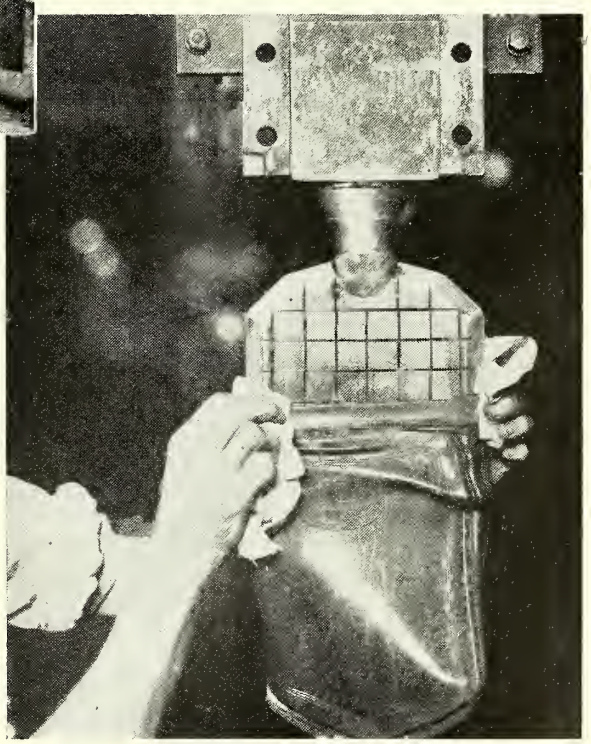


OTHER STAGES IN THE PROCESS



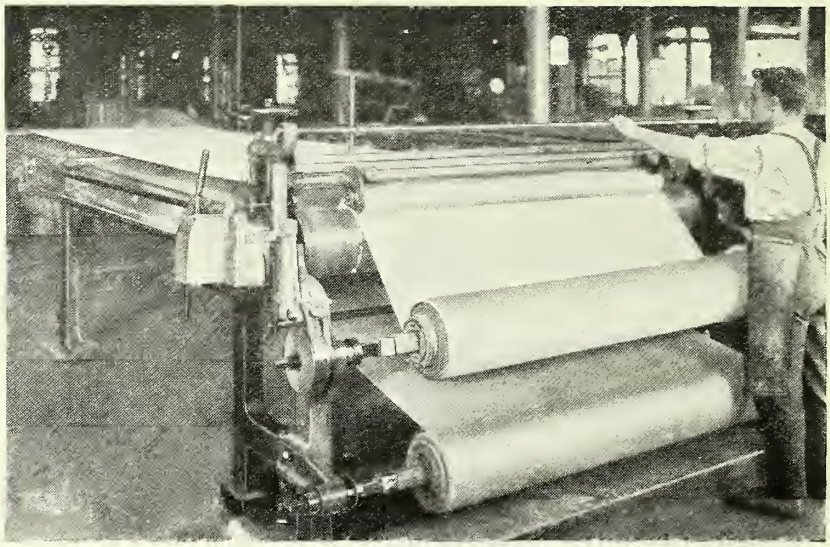


PART OF THE MOULD REMOVED



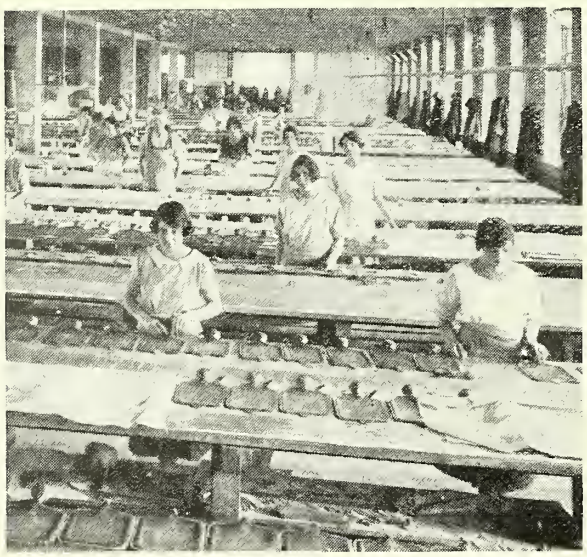
REMOVING THE CORE

bulb has been lifted out of the mould and cooled, then the neck portion is drilled. The seamless pattern bulb is made on a mould composed of a mixture of French chalk and plaster of Paris. This mould is baked until it is very hard and then polished, after which it is dipped in a rubber compound which has been let down and dissolved in naphtha. After this core has been dipped and dried a sufficient number of times till there is the required thickness of rubber it is then introduced into an open steam chamber and under high pressure is vulcanised. After cooling the bulb is left with a solid core within it. This is easily disposed of by hammering with a wooden mallet and so breaking the composition core which, now being powder, is easily extracted from the neck of the bulb.



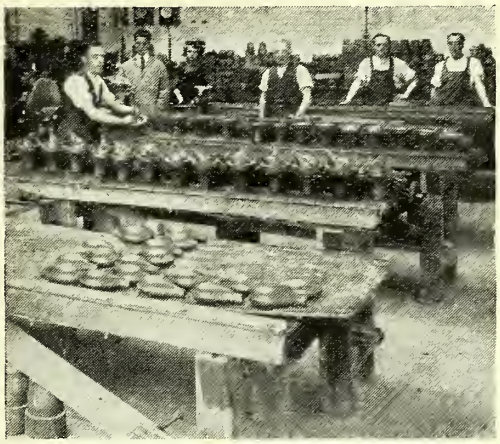
A SPREADING MACHINE

The third section of heavy goods consists of the cut sheet articles, such as nipple shields, urinals, and the various sundries such as are demanded by the public. Cut sheet in the beginning is a pure rubber as received from the plantation. After passing through the grinding mills and becoming a pulp and the resilient nature of the rubber killed, it is passed through the masticator, an immense machine, where the rubber is torn apart and firmly kneaded together until there can be no risk of air bubbles being present. After leaving the masticator it is in a cylindrical form about six feet long and about a foot in diameter. This is then placed within a hydraulic press, where it is firmly rammed down into a big steel cylinder. This steel cylinder full of rubber is then taken into the freezing chamber, where after a month or six weeks it is frozen into a solid stone-like mass. The steel cylinder is then broken away from the rubber and this mass of rubber weighing six or seven cwt. is then fitted into a machine where a six-foot knife cuts a thin sheet from the circumference of the cylinder of rubber as the cylinder of rubber revolves towards the vibrating knife. Each of these vibrations causes a definite cut, and it is these cuts which make the ribs on cut sheet. The sheet is then taken up into the making-up departments and cut up into the various forms required and according to the article demanded at that time. The process of vulcanisation of pure rubber is different to that of all the other processes, for the articles are dipped into a liquid composed mainly of sulphur chloride and a solvent, and so vulcanised. After vulcanisation the articles are carefully washed and no trace of sulphur chloride is left.

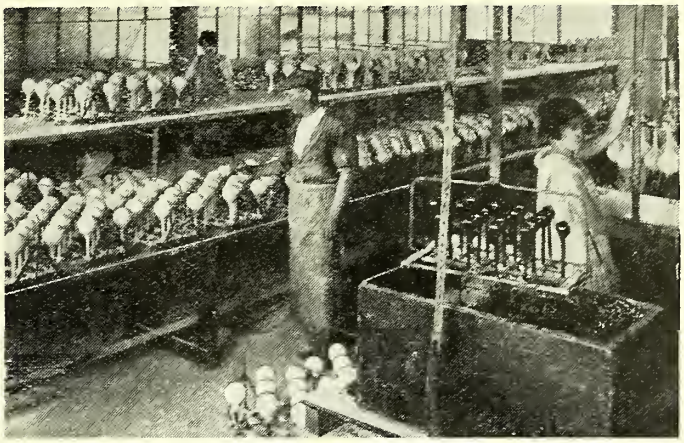


BUILDING UP THE FABRIC BOTTLE

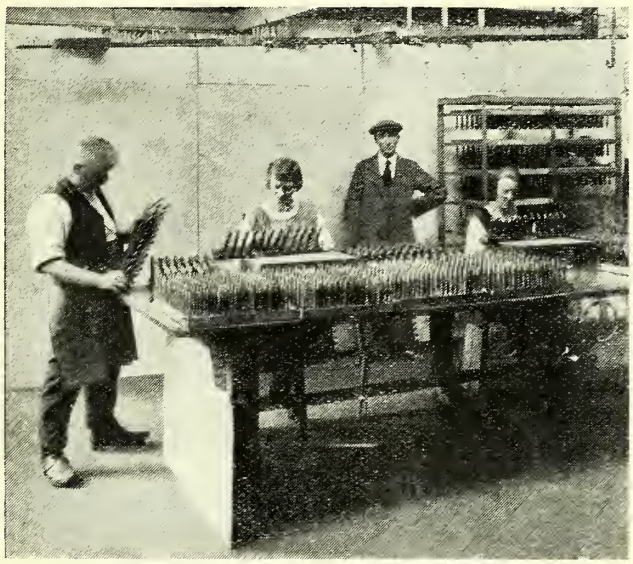
The Mitcham factory, where the children's bottle teats and valves are made, also surgeons' and household gloves, is wonderfully laid out, each manufacturing section being quite complete in itself. The multiplicity of shapes and weights of teats is surprising, one hundred and seventeen shapes being counted as standard. In the East it seems that no self-respecting baby will so much as look at an amber-coloured teat; it must be black. Even in England certain shapes popular in the North would not be bought in the South. In France and in America the shapes vary considerably. Added to this immense variety quite a number of these shapes are made in weights varying from 3½ oz. per gross to even 26 oz. per gross. At Mitcham are made possibly the greatest quantity of teats sold, for almost three-quarters of a million leave the factory each week. Each and every one of these teats passes through a very minute inspection for shape, and against the light for any impurities and air bubbles. The manufacture of a teat takes some considerable time, for, after every dip the teat must dry before being dipped again. The teat moulds are fastened in a frame, each frame holding a gross. Four gross are dipped at one time into a solution of the finest lemon crêpe and refined naphtha spirit, and after draining off are placed in the drying chambers to drip off completely before again being dipped. After the dipping process is completed and the unvulcanised teat is dry the rubber on the lower section of the mould is rolled up to make the familiar roll on the teat or else banded to make the band type of teat. The frame of a gross of teats is then dipped into the vulcanising liquid, and after being washed the teats are again dried off and afterwards stripped from the moulds. After inspection and packing they are ready for despatch. Surgeons' and household gloves are manufactured in a similar manner, only, of course, the rubber liquid is of a different quality. Enemas are passed through the dipping process, only the bulb portion is first made separately, semi-vulcanised, and then dipped to provide a further thickness of bulb and to make the tube. In this process the dipped rubber firmly unites with the bulb.



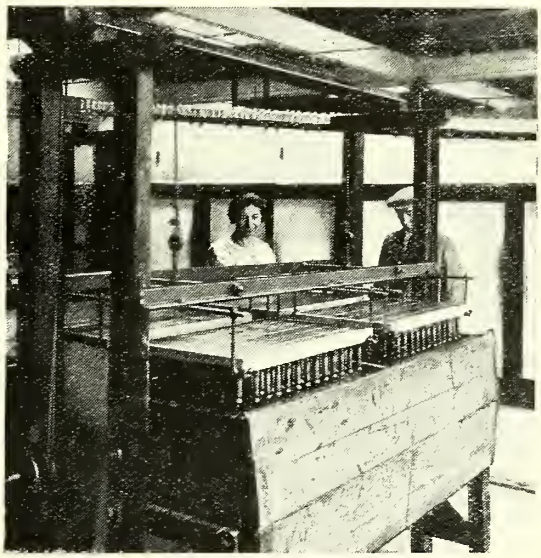
MAKING ORDINARY BULBS



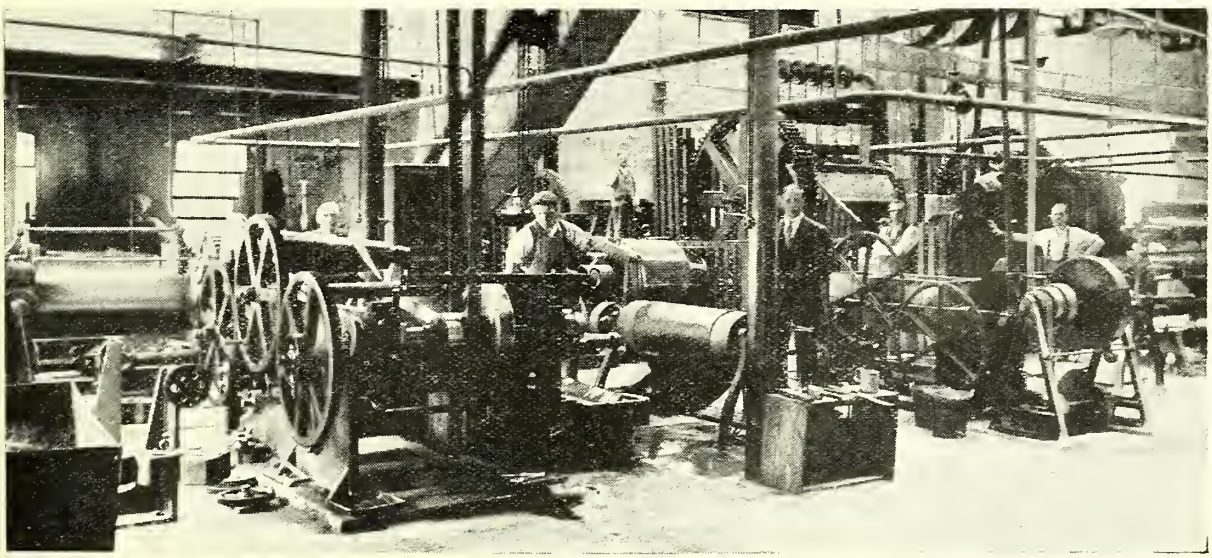
MAKING SEAMLESS BULBS



STRIPPING AND ROLLING TEATS



DIPPING FRAMES FOR TEATS



MAKING CUT SHEETS

American Indigenous Drugs

A Contribution by S. B. Penick, Jr., describing the Production, Collection and Marketing of Botanical Drugs in the United States

So much has been written and said of America's industrialism in the last decade that a myth has arisen of mass production, mechanized skill, and terrifying efficiency as being typical of all forms of business. Needless



Many of the collectors in the Blue Ridge sections live in these small cabins. The hut pictured above is located about twenty-five miles from any railroad in the mountains of North Carolina. At the right of the photograph is the tool shed, which also serves as a drying-shed for the family's collection of " roots and herbs."

to say, there are comparatively few enterprises which permit the introduction of such methods, and, by contrast, other businesses seem extraordinarily simple and almost primitive. Because of its comparative insignificance from a monetary standpoint, the industry of producing and marketing the indigenous botanical drugs falls naturally into the latter class. Before considering the methods of production, it is well to look into the extent of this business and its geographical location. Some 250 to 300 medicinal botanicals are native to the United States, some of them playing an important part in the health of the world, many of them obscure and little known. Of the forty-eight states comprising the Union, there is hardly one that is not capable of producing one or more drugs, although in many instances it has not become commercially expedient to do so. Many drugs, notably hydrastis, pruni virg., etc., are found in virtually every part of the country. Others such as cascara sagrada, viburnum and lobelia are confined to a limited area. Except in a few isolated cases, cultivation has not proved successful, and practically all of the American drugs of commerce are gathered from wild growth. Hydrastis, of course, is largely cultivated, and it is probable that less than five per cent. of all the hydrastis produced is from wild plants.

Domestic Grown Cannabis

During the war, efforts to cultivate in the United States drugs originating in other parts of the world met with only limited success. It was found that cannabis indica was particularly adaptable, and it is still produced in sufficient quantity to take care of all domestic requirements. Belladonna and digitalis can be successfully produced, but the high cost of labour prevents successful competition with the European crops. Stramonium, although it grows profusely in the wild state, is not cultivated, and even the wild grown is seldom gathered. The Government has attempted to foster the growth of these products in the past, through the imposition of substantial import duties; but the difference in production cost has been so great that the duty has not aided and is being abandoned.

Botanicals of the Blue Ridge

It has been previously pointed out that the distribution of drug-producing plants is nation-wide; but by far the greatest volume is produced in a very small area. This territory embraces that section of our nation called the " Blue Ridge " country. As every student of both geography and history will recall, the United States, east of the Mississippi River, is relatively flat land broken by only one important mountain-range, the Appalachian. Beginning in Maine, the north-eastern state of the Union, it sweeps through the Eastern states down as far as North Carolina and Tennessee. These were the mountains which, to the early colonists, represented the end of the country, and beyond which they expected to find the Pacific Ocean. This mountain-range expires in a group of lofty peaks in south-western Virginia, western North Carolina and eastern Tennessee—the Blue Ridge country. It is of unrivalled beauty, forested, dotted with lakes, almost eternally green with pines. It is peopled by direct descendants of the earliest colonists of America, who



Aside from its typical construction of rough pine boards and logs and native stone, this home of a crude drug gatherer is of particular interest, as it shows a collection of roots being dried in the sunlight. Such primitive methods are still in vogue in much of the producing area. The young man in the foreground seems more interested in the mysteries of automobile tyres than in botanicals, but he, too, will probably become a gatherer in a very few years, just as generations of his forbears have been.

have lived in the mountain fastness for generations and know little of the rest of the world.

Taking Asheville, N.C., as the centre of the collection district, and describing a circle of 150 to 200 miles

diameter in each direction, the largest drug-producing section of the United States is included. More than 200 wild-grown drugs are native to this country and are gathered in these mountains.

Primitive Collection Conditions

The process of collection is simple. Knowledge of the various plants is inherited by the mountaineer families. Little enough is passed along from one generation to the next in the way of this world's goods—a small plot of ground, a one or a two-room wooden shanty, and a few miscellaneous household belongings. But each family instructs its young in the mysteries of medicinal plant identification and collection; how to distinguish boneset, catnip and lobelia; where to look for sanguinaria, ginseng, cypredium and the cohoshes (cimicifuga and caulophyllum); when it is easiest to peel the bark of pruni virg., viburnum, and slippery elm. Very few gatherers devote their full time to procuring drugs. While the men of the family plough the fields and tend the meagre crops, the children and often the women roam the nearby woods and meadows, pulling roots or herbs. Sometimes a patch of timber is cleared, and among the trees there may be some of medicinal value. Branches then are lopped off and dragged home to be peeled at night by the entire family. After the drugs are secured they must be prepared for the market. Roots must be washed to remove the adhering soil and, if they are large, bulky roots must be cut into strips to prevent mould in drying. Leaves and herbs must be carefully spread out under shelter so that they will dry a good, bright green colour. As the merchants' buying lists always say in heavy type, " everything we buy must be dry."

Handling the Output

After the goods are ready they must be marketed. Often enough the gatherer takes his roots and herbs to the nearest country store. This latter is a fast-fading American institution which deserves a little mention of its own. In reality, it is a miniature Selfridge's, selling everything from tractors to sugar, and in addition conducting a banking and trading business with all its customers. Good roads and the inevitable Ford car are fast taking the farmers into the cities for their business and gradually spelling the doom of the country store. The gatherer, then, takes his accumulation of roots to the country store where he barters them for sugar or coffee or other necessities which he does not produce on his farm. The owner, who keeps the leading dealers' buying lists before him, is usually a fair judge of quality and a shrewd judge of values. Once a month, more or less, the store gathers its drugs together and ships them to the crude drug dealer. Not all of the gatherers clear their produce through the country stores. Many of them trade directly with the crude drug merchant. The merchant is a specialist in crude drugs. He must be thoroughly familiar with qualities and market values. It is he who prepares the drugs for the market, cleans and grades and packs them, and then merchandises them. It will be easiest for the writer to illustrate the peculiar functions of the merchant by reference to a particular case—the Asheville collection depôt of S. B. Penick & Co. at Asheville, North Carolina.

Fixing the Price

Regularly on the first of each month a buying price list is published establishing the prices to be paid for the ensuing month. The establishment of these prices is a delicately adjusted affair. The final arbiter is supply and demand. If prices are set too high, overproduction and losses result. If too low, there is an insufficient supply and prices advance; but it is a peculiar thing that the merchant seldom profits from the advances—too often he is caught with unfilled contracts. It might seem that this setting of price is a fairly simple thing. All that is necessary to do is to discover the right price to bring out the right collection and the work would be done once for all. This would be true were it not for many factors that must be considered. It is a peculiar thing, but nature's wild crops vary widely and unaccountably from season to season. For example, prices as high as 75 cents a lb. were vainly offered to gatherers to secure supplies of lobelia in 1926; the following year the heaviest collection on record took place, even though prices were reduced before the end of the season to well below ten cents per lb. The factors which must be gauged in successfully fixing prices are demand, labour supply, crop size, and past experience. Sometimes, no doubt, successful crystal-gazing or palm-reading would be of an inestimable value. Aside from setting the prices paid the collector, the merchant fulfils other important functions. He, more than any one else, can influence and improve qualities, always, however, limited by the price he can finally obtain for his product. Certainly the merchant plays an important part through continual instruction and familiarisation of the gatherer with improved methods of cleaning and drying. Often a bonus is offered for re-washed roots or hand-picked leaves. The merchant is responsible for seeing that an adequate collection results. It frequently happens that a small locality has been the source of supply of some important drug for years. Gradually the annual output diminishes, and even higher prices fail to bring an adequate return. Finally it becomes apparent that a new centre of production must be found, and it devolves upon the dealer to find and develop it. For example, we were threatened some years ago with having our entire source of supply for an important drug closed to us overnight through the conversion of our gathering territory into a national park, embracing hundreds of thousands of acres. Faced with a critical situation, our Asheville house, with the use of accurate photographs of the plant in question, broadcast thousands of circulars, together with a full description, methods of collection and prices paid. The result was the opening of new and satisfactory sources. Once the goods have been gathered together, the quality approved, and the packing completed, they are ready to be shipped to the millers and exporters in the large cities or to the big manufacturing pharmacists whose requirements are sufficiently large to permit their purchasing directly from the first hands. That it is a precarious business is amply attested by the gradual withdrawal of many firms from the field until at present there are only a few all told, and but one or two large ones which confine themselves exclusively to the production, preparation, and merchandising of botanicals. In this article we have dealt primarily with the collections made in the Southern " Blue Ridge " country, the largest and most important production centre. Much the same conditions apply to the other principal producing sections, the Middle West, and the Pacific Coast. Small collections are made of isolated articles in such widely-separated states as Texas and Vermont. In the foregoing article the writer has attempted to offer a brief picture of present-day methods of producing drugs in the United States.



A young gatherer digging *Baptisia Tinctoria*, using a pick, such as is used in construction work.

The Commerce of Isinglass

A Survey of this interesting Industry, of which London is the chief Selling Centre

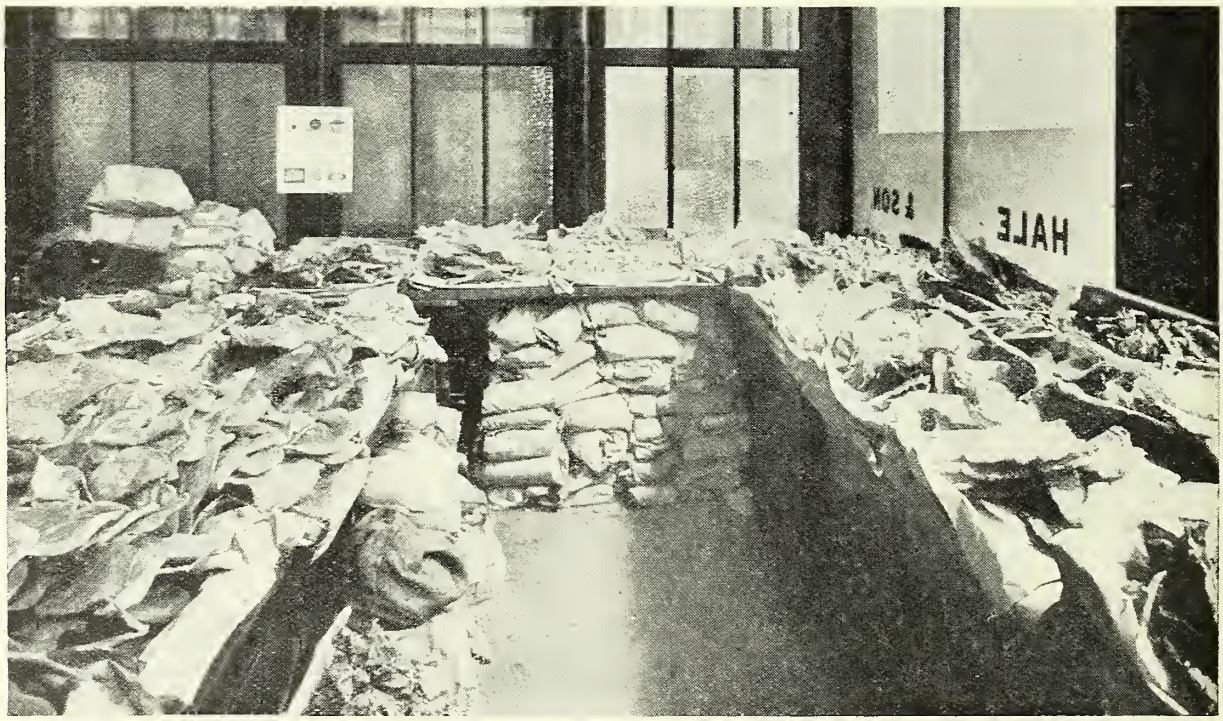
AMONG the many articles of raw produce dealt with in Mincing Lane not the least interesting is isinglass, which is sometimes referred to as fish maws or fish glue, but isinglass is the usual name employed by the trade. It consists of the dried swimming bladders of various fishes, chiefly sturgeon and allied species, particulars about which were given in the Compendium (*C. & D.*, May 21, 1927, p. 631). The chief sources of supply are:—Bombay, Karachi, Singapore, Para (Brazil), Maranham (Brazil), Penang, Maracaibo (Venezuela), West Indian Islands, Rio Grande, Senegal, China, and the Russian rivers.

Isinglass is divided up into approximately four descriptions, viz., lump, pipe or tongue, leaf or open pipe, cake or purse. There are many commercial varieties of each kind, according to the way the bladders are packed or folded, but the names do not indicate that they come from the same fish, but only from the same port. Thus Penang "oyster" is derived from a species of *Arius;* Manila "thin cake" isinglass has a similar form, and doubtless derived from a fish allied to *Arius*. The term "tongue" is applied to compressed tubular bladders; the term leaf to bladders which have been split open and present a flat appearance, like Russian isinglass. The term lump is applied to large or thick pieces like Brazilian; the latter when split open is known as "honeycomb." Isinglass, when pure, contains about 70 per cent. of gelatin, and for its whiteness was much prized before the manufacture of gelatin had arrived to the perfection it now has. Isinglass is not the only valuable product obtained from the sturgeon. It also yields the delicacy known as caviare, which consists of the preserved roe of the fish.

The various descriptions of isinglass which come to the London market usually take their name from the port from which they are shipped, such as Para, Maranham, Bombay, Rio Grande, etc.

London the Selling Centre

England is the principal market of the world for isinglass of all kinds, and it is to the London auction rooms that the bulk of the world's output finds its way, and the auctions are generally well attended by all the leading buyers. The Continent is also represented at these auctions, but only a very limited quantity finds its way to foreign countries. Isinglass is cleaned as far as possible abroad, and then dried in the sun, and finally shipped to England packed chiefly in wooden cases, but sometimes in bags or bales. On its arrival in London it is dealt with by the Port of London Authority, or other wharfingers, graded and sorted into "piles" according to quality, substance and colour.



MESSRS. HALE & SON'S ISINGLASS "SHOW" AT FEN COURT, E.C.

Sorting and Grading

The sorting and grading of isinglass on arrival can only be done by very experienced workmen, as buyers to a great extent rely upon the dock or wharf-drawn sample to accurately represent the bulk, although they usually also inspect the goods at the public warehouses before purchasing in the auction. The colour of isinglass, as well as the substance, is an important factor in establishing the value of the commodity.

It is sometimes found, especially with the Para and West Indian description, that on its arrival it is found to be covered with blue mould. This is chiefly caused through the goods being packed in a damp condition at the port of shipment, and necessitates each piece being brushed before being graded. On completion of the grading and piling by the Port of London authority or wharfingers, samples of each "pile" are drawn and sent to the selling broker's office to be placed on show for buyer's inspection.



ANOTHER VIEW OF THE SAMPLE ROOM

Public sales of isinglass are held once every month, with the exception of August and December. For these auctions, catalogues are compiled of the goods to be offered, and give full particulars of each parcel. Buyers are, therefore, able to inspect the samples on show in the selling broker's showroom, or can see the bulk on show at the various warehouses. The auctions are held in Mincing Lane, and are attended by the whole of the firms representing the isinglass trade. The representatives of these firms compete with one another for the purchase of the goods offered, and it is in this way that competition is obtained and the highest price realised. The principal use for isinglass, as is well known, is for the clarifying of beer, but it is sometimes used in a small way for medicinal and culinary purposes. At the conclusion of the public sales the goods are delivered to the warehouses of the manufacturers, and it is then that the most important process of the handling of this article begins. This process consists of washing and cleaning, drying and rolling, and from this point the article loses its identity from its original appearance. It now appears in the form of long light-coloured parchment-like strips, and is cut up into small strips whose thickness and width differ according to requirements. The final process having been completed, the strips or cuttings are sent to the breweries according to the orders received. These strips or cuttings are then placed in solution and become what is known as "finings."

The values of the different kinds of isinglass differ considerably, the lowest being about 4d. per lb. and the highest about 16s. per lb., according to substance, colour, etc.

Shipped on Consignment Only

Isinglass is one of the few commodities that must essentially be a consignment business, and the shippers at the source of origin are amply protected by being able to sell their produce on the open market and thereby receive the full value according to the conditions ruling in the market. In the past several attempts to make forward delivery contracts in isinglass have failed, chiefly on acount of the fact that the leading buyers prefer to know what they are buying, and are prepared to pay an increased price for it, rather than run the risk of buying solely on description and receiving an unsatisfactory delivery.

C.i.f. Business Unsatisfactory

Isinglass, like ivory, tortoiseshell, mother-o'-pearl, and a few selected drugs, represents one of the commodities that buyers still insist on purchasing on the spot, and of the many articles of produce which during the past few years have suffered through the world-wide trade depression, isinglass is one of the select few that has suffered least. Therefore, this goes to show that a return to the consignment business on most articles of Mincing Lane produce would tend to a revival of trade, as it would definitely be a deterrent to the "forward" or c.i.f. business, which is practically all speculative. It is generally agreed on all sides that the volume of speculative business, which has so rapidly increased since the war, is one of the principal causes of the present depression. The great strides made in this class of business are due almost entirely to war-time conditions; in fact, the growth of the c.i.f. business in recent years is remarkable, and yet it has mostly brought trouble in its train. The result is fairly obvious, as practically every other shipment made brings with it claims for inferior quality, and the consumer finds himself forced to accept an article, the quality of which is frequently useless for his requirements, and the shipper is forced by arbitration to compensate the buyer for his loss. Therefore, neither the seller nor the buyer is satisfied with his part of the business. The isinglass shipper is, consequently, in a much happier position, as, providing his consignments are satisfactory, he will have no difficulty in making a speedy sale. It is to be hoped that shippers of other produce will follow the isinglass shippers and return to the pre-war custom of sending consignments to the London market, and thus revive a class of business which was originally responsible for the moulding of the prosperity of the British Empire.

Little has hitherto been written about the commerce of isinglass, so that the above information should be welcome to the trade. Further details about this interesting but limited industry will be found in "Pereira's Materia Medica" (vol. II, part II, pp. 2224-2233, 1885), where the relative values of the different kinds then in the market are given.

Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling, packing, etc. Qualities of chemicals, drugs, essential and fixed oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

28 Essex Street, W.C.2, June 25

In view of the fact that our Special Issue went to press a day earlier than usual, this report closed on Wednesday morning. In the interval the trend of values has continued downwards, and until there appears to be a resumption of general demand there is nothing to prevent the lower level of values becoming more or less permanent. Ipecacuanha is again cheaper, and the price is said to be below cost of collection. New crop cascara sagrada to arrive is again cheaper, but old matured bark is about unchanged. Belladonna leaves and Calisaya cinchona are scarce on the spot. Kamala is dearer for drug with low percentage of ash. Menthol is easier. Among the aromatic seeds, Spanish anise is cheaper on the spot, and for new crop coriander to arrive and on the spot, easier rates have been paid; Dutch caraway is also easier. In pharmaceutical chemicals business seems to have been quieter than ever, but quoted prices show little change. Paraformaldehyde is a trifle easier. Among the fixed oils, the bulk of the items are offered at lower levels, business continuing disappointing. The reductions include acid oils, castor, coconut, groundnut, palm kernel, soya, and linseed. Heavy deliveries of turpentine were made, which helped in steadying the market.

Higher	Firmer	Easier	Lower
Kamala (c.i.f.)	Mercury (dealers)	Antimony Caraway seed (Dutch) Cassia oil Castor oil Coriander seed (c.i.f.) Cotton oil Lemon oil Linseed oil Menthol Palm kernel oil Paraformaldehyde Pepper Peppermint oil (Jp.) Soya oil	Acid oils Anise (Spanish) Betanaphthol Cascara sagrada (new crop) Coconut oil Ground nut oil Ipecacuanha (M. Grosso) Peppermint oil (Amer.) Rubber Senega Shellac Turpentine

Crude Drugs, etc.

Antimony.—There has been further evidence of ease, as Chinese regulus and spot lots now stand at £26 to £26 10s. delivered warehouse. The position has been largely dominated by the unsettlement in silver, and it is apprehended that the price of the latter might again decline and thus complicate matters still further for antimony. The c.i.f. quotation for shipment has been reduced to about £22 10s., but this figure is rather nominal. Chinese crude is quite nominal on the spot at £21 10s. In English refined, high-grade still stands at £46 to £46 10s., but further concessions have been made for ordinary brands, which are obtainable down to £39, and even £38. Chinese white oxide is quoted £30 10s. to £31.

Cascara sagrada.—The new peel is offering at the cheaper price of 44s. per cwt. c.i.f. Owing to the depression in the lumber trade there appears to be more and cheaper labour available for peeling cascara. On the other hand, old matured bark maintains its previous value.

Cevadilla.—For shipment from the Continent 89s. per cwt. c.i.f. is quoted for f.a.q. new crop.

Cinchona.—Bolivian cultivated Calisaya bark is very scarce, and practically unobtainable on the spot, while nothing is offered to arrive.

Cloves are quiet but steady, with Zanzibar quoted at 11¾d. per lb. on the spot. To arrive sellers offer June-July at 11½d., and August-October at 11¼d. c.i.f.

Landings in London of Zanzibar during the week ended June 21 were *nil* and the deliveries 86, leaving a stock of 1,353, against 1,715 in 1929 and 9,909 bales in 1928. The landings in London from January 1 to June 21 have been 5,845, against 4,170 in 1929, and the deliveries 4,489, against 4,842 in 1929.

Cod-liver oil.—A Bergen advice dated June 18 states that most of the production is in the hands of the exporters and a further decline in prices is regarded as improbable. The demand from abroad has improved somewhat, as buyers prefer to cover at present reasonable prices.

Copper sulphate.—The export demand is still confined to narrow limits, and British Associated Makers are quoting £24 upward, but this figure would doubtless be shaded, basis f.o.b., casks, less 5 per cent. Offers are still being made from the Continent at around £22 f.o.b.

Gentian.—French for shipment is quoted at 32s. 6d. per cwt. c.i.f.

Ginger.—West African is quiet at 40s. 6d. per cwt. on the spot, and to arrive 38s. c.i.f. is quoted. Fair washed rough Cochin is offered at 75s. on the spot, and forward at 57s. 6d. c.i.f. Jamaica is 58s. to 60s. for small and 80s. to 85s. for bold.

Ipecacuanha.—Matto Grosso is cheaper with sellers of f.a.q. at 10s. 3d. per lb.

Kamala.—Quality suitable for export to the United States, having an ash content of about 8 per cent., is quoted at the higher price of 3s. 3d. per lb. c.i.f.

Lycopodium.—Treble-sifted quality is quoted at 1s. 10d. per lb. c.i.f.

Menthol is easier, Kobayashi-Suzuki offering at from 14s. 7½d. to 14s. 10½d. per lb. on the spot. To arrive, from 13s. 10½d. to 14s. 1½d. per lb. c.i.f. is quoted.

Mercury.—The tendency is somewhat firmer, which may be attributed to the fact that offers on the part of merchant firms have been reduced to almost negligible proportions. It looks as though supplies available on the spot are very small, which is not surprising on account of the recent much smaller imports. There has been a rather better demand lately from home consumers, and, as outside competition has fallen off considerably, this has enabled the agents of the Combine to secure more business. The latter had recently shaded their spot quotation at one time to £21 15s., but they now stand at about £22 to £22 5s. per bottle net according to quantity. The official quotation for shipment f.o.b. is £21 15s. net for not less than 25 bottles.

Pepper is easier, closing steady at 10⅞d. per lb. for Singapore on the spot, with June-July shipment at 9¼d. c.i.f. Lampong is 10¾d. spot. Sales for shipment include April-June at 10¼d. to 10⅜d., May-July at 9d. to 9⅛d., August-October at 8⅜d. c.i.f. Tellicherry is 11d. spot. Alleppy is 10¾d. spot. White Muntok is lower at 1s. 1½d. spot. Sales include April-June at 11½d. to 11⅝d., May-July at 11⅛d. to 11¼d., and August-October at 10¾d. to 10⅞d. c.i.f.

Pimento is quiet and unchanged at 8d. per lb. spot, and for July-August shipment 7½d. c.i.f. is quoted.

Rose petals.—New crop French to come forward are quoted at 4s. 6d. per lb.

Rubber is again easier, and about ⅛d. per lb. lower on the week. During the past week a considerable amount of spot rubber has been cleared, as manufacturers are now beginning to realise that the present low prices will stimulate the demand later on. The prices secured for off grades are so low that it is more than likely the producers will stop shipping these grades unless the market shows an appreciable improvement. It is reported that several of the native producers have closed down in consequence of the continued fall in prices. Stocks continue to accumulate and last week arrivals totalled 2,220 tons, whilst deliveries were 1,436 tons, showing a further increase of 784 tons in the stocks. The London stock now stands at 78,888 tons, against 30,617 tons at the corresponding period last year. The Liverpool stock now stands at 27,354 tons. Quotations (Tuesday, 5 p.m.): No. 1 standard ribbed smoked sheet, spot and July, 6d.; August-September, 6⅛d.; October-December, 6¼d.; January-March, 6⅜d. per lb.

Sandarac.—The shipments of sandarac from Morocco for the year 1929 aggregated 2,233 quintals (quintal equals 220 lb.), having a value of 4,190,000 francs. France and Algeria together took 130,680 lb., for valuation of 1,129,000

francs. United States was the second largest purchaser, receiving 99,062 lb., for a value of $41,393.00.

SEEDS.—ANISE.—Spanish is now 55s., and Russian 31s. per cwt. on the spot. CANARY remains dull. Mazagan on spot is quoted at 27s. 6d., Tangier is offered at 26s., and Morocco (f.a.q.) 4 per cent. at 25s. 6d. Owing to the poor demand for canary seed on this market over 600 bags have been shipped to New York, where good seed is in large demand. CUMIN.—Sifted Malta is 70s., and fair average quality 65s. Morocco is unchanged at 57s. 6d. spot. FENUGREEK on spot is selling at 18s., and for July-August shipment 14s. 6d. c.i.f. is quoted. CORIANDER on spot is selling in one-ton lots at 7s. 3d. For June-July shipment (new crop) business has been done at 8s. c.i.f. CARAWAY on spot is easier, sellers now quoting 35s. 6d. per cwt. for Dutch. DILL.—Indian (11 per cent.) is quiet at 21s. 6d. on the spot. MUSTARD.—English is 26s. to 31s. per cwt. according to quality. N'YOUTI is selling at 10s. 6d. per cwt. spot. FENNEL is quoted at 38s. 6d. per cwt. on the spot.

SENEGA is rather cheaper, spot holders quoting from 2s. 8d. to 2s. 9d. per lb., and for new crop 2s. 3d. c.i.f. is quoted.

SHELLAC is inactive and lower, with sellers reserved. Usual standard TN orange is 117s. 6d. per cwt. spot; fine orange is 125s. to 210s.; pure button 145s., and AC cakey 125s. To arrive, July-August is 94s. 6d., and September-October 98s. c.i.f. Sales for delivery include August at 95s. to 98s., and October at 98s. to 107s. 6d.

WAX (VEGETABLE).—Japanese is dull of sale at 69s. per cwt. on the spot, and for shipment 55s. c.i.f. is quoted.

Essential Oils

THE market has been dull and business patchy. Prices generally remain unchanged. Cassia and lemongrass are easier. American peppermint is weak, with new crop offering at lower rates. Citrus oils are weak. A new Italian Decree-Law to regulate the production and commerce of oil of bergamot has been enacted (*vide infra*).

ANISE (STAR).—With limited spot supplies, holders of Red Ship brand ask 5s. per lb., and any demand would quickly absorb stocks. A feature this week is the resumption of offers of the "Red Ship" brand to arrive, it being understood that after a lengthy interval the distilleries are working again. Shippers offer July-August shipment at 2s. 9½d. per lb. c.i.f. for leads, 2s. 8d. for tins, and 2s. 7¾d. in drums; the goods would not, however, be in London before October.

BERGAMOT is unchanged without any business passing at from 10s. to 10s. 6d. per lb. spot. To arrive, 9s. to 9s. 6d. c.i.f. is quoted.

A new Italian Royal Decree-Law introduced to regulate the production and commerce in oil of bergamot gives power to the Government to institute a system of warehouses in various localities for the storage of oil of bergamot, and one such warehouse has been established in Reggio Calabria. The deposit and storage of the oil will be carried out according to previously made regulations. Oil of bergamot destined for export must be accompanied by a certificate of analysis, to be issued from Government laboratories, which will indicate the purity.

CASSIA is easier, to arrive, offering at 3s. per lb. c.i.f., the spot value being 3s. 9d.

CITRONELLA.—Ceylon spot is 2s. 3d., and to arrive 1s. 9½d. c.i.f. is quoted. Java is quoted at 2s. 4½d. per lb. spot and for shipment.

EUCALYPTUS, 70 to 75 per cent., is 1s. 6d. spot, 75 to 80 per cent. 1s. 7d., and 80 to 85 per cent. 1s. 8d. spot.

GINGERGRASS is 7s. 6d. spot, and to arrive 7s. c.i.f.

LEMON remains weak, with Sicilian hand-pressed offering at from 4s. 3d. to 4s. 6d. per lb., and machine-made at from 3s. 6d. to 3s. 9d. To arrive, hand-pressed is quoted at from 3s. 3d. to 3s. 6d. c.i.f., and hand-pressed at from 4s. to 4s. 3d. c.i.f.

LEMONGRASS is easier at 2s. 7d. spot and 2s. 6d. c.i.f. to arrive.

PALMAROSA is quiet at 9s. 6d. spot and 9s. c.i.f. to arrive.

PEPPERMINT.—Japanese dementholised is easier, five brands offering at 4s. 9d. and Kobayashi-Suzuki at 4s. 11d. per lb. on the spot. To arrive, from 4s. 10½d. to 5s. c.i.f. is quoted. American tin oil shows a further decline, with new crop offering at 11s. 6d. per lb. c.i.f., the spot value of tins being about 12s. 3d. to 12s. 6d.

The Italian central bureau of commerce has raised the official valuation of oil of peppermint, on which the present import duty of 15 per cent. *ad valorem* is based, from 35 to 50 gold lire per 100 kilos. This increase is to afford protection to the Italian industry.

ROSE.—According to the official statistics published by the General-Direction of Statistics, Sofia, exports of Bulgarian otto of rose during March 1930 amounted to 22 kilos, valued at 2,578,000 leva, compared with 118 kilos, valued at 9,014,000 leva, for the same month of 1929. In the January-March period of the present year exports have amounted to 208 kilos, valued at 23,176,000 leva, compared with 174 kilos, valued at 13,234,000 leva, for January-March 1929.

YLANG-YLANG.—Manila is quoted at from 5s. to 6s. per oz. according to seller. Bourbon extra première is quoted at from 46s. to 48s.; second superieure, 27s. to 28s.; second, 22s. to 23s., and third, 13s. 6d. Comores/Madagascar first quality is 44s., second quality 22s., and third 11s.

The following arrivals have taken place from the countries indicated during the period June 18 to June 24 inclusive: Almond (Fr.) 1 cs.; bay (O. Dut. Poss.) 4 cs., cassia (H.-K.) 30 cs.; cedarwood (U.S.) 3 dm.; citronella (Java) 8 dm., (Cey.) 2 dm.; eucalyptus (Aust.) 26 cs.; lavender (Fr.) 1 cs. 4 dm.; lemon (It.) 97 cs.; lime (O. Dut. Poss.) 4 cs., (O. Br. Poss. in W. I. Is.) 3 cs., (U.S.) 1 cs.; nutmeg (U.S.) 6 cs.; orange (It.) 1 cs., (U.S.) 1 dm. 1 cs.; peppermint (Fr.) 1 cs., (Jap.) 10 cs.; pine (Switz.) 4 cs.; verbena (Sp.) 1 dm.; ylang-ylang (Fr.) 2 cs.; undescribed (Fr.) 3 cs., (Ger.) 1 cs., (It.) 3 cs.

Pharmaceutical Chemicals, etc.

IF possible the market seems to have been quieter than ever during the past week, the lack of business having a depressing effect on the general tone. Quoted prices show little change.

ACETANILIDE remains quiet and unchanged: B.P. crystals and powder, 1s. 4½d. to 1s. 6d. per lb. as to quantity.

AMIDOPYRIN continues dull and quoted prices are unsteady: crystals, five cwt., 12s. 9½d. up to 13s. 3½d. per lb. for small parcels; powder, 1½d. per lb. more.

ASPIRIN is unchanged so far as quotations are concerned; the market is anything but active and the tone rather easy. home trade, 2s. 9d. to 2s. 11d. per lb. as to quantity; export to Colonies and British Possessions, ten cwt., 2s. 8d. up to 2s. 9½d. per lb. for small parcels; export to other destinations, about ¾d. per lb. more. Home and Continental quoted prices are level.

BARBITONE is very slow of sale: spot offers are at about 7s. to 7s. 6d. per lb. as to quantity.

BENZALDEHYDE is meeting with but little inquiry: quantities in carboys, about 2s. per lb.

BENZOIC ACID (B.P.) is steady and a moderate business is reported: quantities ex works, about 2s.; small spot parcels, about 2s. 1d. per lb.

BENZONAPHTHOL is unchanged, with the market slow: quoted from 2s. 10d. to 3s. per lb. as to quantity.

BISMUTH SALTS are unchanged at Convention rates; outside goods are available at slightly less: carbonate, 6s. 6d. to 7s. 3d.; subnitrate, 5s. 6d. to 6s. 3d. per lb. as to quantity.

BROMIDES.—The state of this market continues rather difficult; competition is very keen, while the volume of business moving is by no means good: dealers quote ammonium, about 1s. 9d.; potassium, B.P. crystals, 1s. 5d.; granular, about 1s. 5d.; sodium, B.P., about 1s. 8d. per lb. for quantities. Home makers are competing on level terms.

CALCIUM LACTATE is unchanged on a quiet but fairly steady market: quoted from 1s. 1½d. to 1s. 3d. per lb. as to quantity.

CITRIC ACID (B.P. crystals).—This market has again been very slow, but there is no definite change in the quoted price of foreign on spot, which continues in the region of 1s. 6d. per lb., less 5 per cent., for quantities.

CREAM OF TARTAR is holding on quotation at last week's figures of 92s. to 93s. per cwt., less 2½ per cent., for quantities of foreign material. The market is not steady at these rates, and large parcels might be taken up at a shade less.

CREOSOTE (B.P.) is unchanged on a slow market at 1s. 8d. to 1s. 9d. per lb.

CREOSOTE CARBONATE is offered on spot at about 5s. 9d. to 6s 3d. per lb. as to quantity, with little interest shown.

GUAIACOL CARBONATE remains slow: dealers quote spot at about 4s. 4d. to 4s. 8d. per lb. as to quantity.

HEXAMINE.—The little business moving here is being done at about 1s. 10½d. to 1s. 11½d. per lb. as to quantity. Convention figures of 2s. 2¾d. to 2s. 4d. per lb. are nominal.

HYDROQUINONE is steady, but inclined to be quieter: quoted from 3s. 7¼d. to 4s. 5d. per lb. as to quantity.

LACTIC ACID (B.P. crystals) continues quiet and easy: quantities in carboys, 1s. 11d. to 2s. per lb. in carboys; smaller lots in bottles, one penny per lb. more.

METHYL SALICYLATE (B.P.) is steady as quoted from all sources at 1s. 3d. to 1s. 5d. per lb. as to quantity.

METHYL SULPHONAL is very slow of sale: dealers quote on spot at 12s. 7d. to 13s. 10d. per lb. as to quantity; market is easy.

PARAFORMALDEHYDE is a trifle easier at 1s. 6¾d. to 1s. 7¾d. per lb., as to quantity, of 100 per cent. powder.

PARALDEHYDE is unchanged on a slow market at 1s. 1d. to 1s. 3d. per lb. as to quantity and packing.

PHENACETIN.—Business continues restricted, with controlled prices being discounted: quoted at 3s. 8d. to 3s. 11d. per lb. as to quantity.

PHENAZONE is quiet and easy on spot at 6s. 11d. to 7s. 1½d. per lb. as to quantity, with powder 1½d. per lb. more.

PHENOLPHTHALEIN is unchanged: quoted on spot at 5s. 11d. to 6s. 1½d. per lb. as to quantity.

POTASSIUM PERMANGANATE (B.P.) is steady but in small request: quantities in drums, 5½d.; druggists' parcels, 6d. per lb.

RESORCIN is unchanged: quoted from 2s. 11d. to 3s. 2d. per lb. as to quantity.

SALICYLIC ACID (B.P.) is unchanged at home makers' values of 1s. 5d. to 1s. 8d. per lb. as to quantity.

SALOL remains dull, with spot prices at about 3s. 7½d. to 3s 10½d. per lb. as to quantity.

SODIUM SALICYLATE (B.P.).—Quoted prices are unchanged, while the market is dull and some cheaper offers are met with occasionally: home trade, powder, two tons, 1s. 10d.; one ton, 1s. 10½d.; ten cwt., 1s. 11d.; five cwt. 1s. 11½d.; one cwt., 2s.; 28 lb., 2s. 1d.; and less, 2s. 2d. per lb., with crystals one penny per lb. more. Export prices, f.o.b. London or Continent, powder, two tons, 1s. 10¾d. up to 2s. 0¾d. per lb. for small parcels, with crystals one penny per lb. more.

SULPHONAL is unchanged on quotation, with the market dull: spot, 10s. 1d. to 11s. 2d. per lb. as to quantity.

TANNIC ACID (B.P. *leviss*) is quoted at about 2s. 8d. per lb. in one-cwt. kegs, with smaller lots up to 3s. per lb.

TARTARIC ACID (B.P. crystals).—There is no material change in the market quotation for foreign on spot, which stands at about 1s. 1d. to 1s. 1¼d. per lb., less 5 per cent., for fair quantities; business has again been poor and the tone continues unsteady.

THYMOL is unchanged on quotation on a slack market: synthetic fine white, five cwt., 8s. 9d. up to 9s. 8d. per lb. for small parcels.

VANILLIN is a slow market, with ex clove oil at about 14s. per lb. in cwt. lots, and ex guaiacol at about 13s. 6d. per lb. in cwt. lots; lower prices for larger quantities in both cases.

Fixed Oils, etc.

PRACTICALLY all products in this market are quoted at lower levels this week, and the volume of business moving continues most disappointing. It is difficult to believe that values can go much lower, while anything like a revival in demand would most certainly bring with it a general recovery in prices. ACID OILS.—Prices for all grades show a fall on the week; market remains slow; coconut and/or palm kernel, 29s. 6d.; groundnut, 24s. 6d.: soya, 22s. spot. CASTOR.—Quoted values are easier, with the market dull; pharmaceutical, 44s. 6d.; first pressings, 39s. 6d.; second pressings, 37s. per cwt. spot, ex-barrels, in not less than one-ton lots. COCONUT.—The market is still dull, and values are much cheaper; deodorised, spot, 38s. 6d.; Ceylon, 29s. 9d. c.i.f. COTTON is again slightly easier and still dull; deodorised, 37s.; common edible, 35s.; soapmaking, 32s. 9d.; crude, 30s. spot. GROUNDNUT.—Prices are lower on a slow market; deodorised, spot, 37s.; crude Oriental, 32s. c.i.f. PALM KERNEL is dull and easier; deodorised, 38s.; crude, 32s. spot. PALM.—Prices are holding on the week after the recent record low levels, but the market continues generally quiet; Lagos, 22s. 3d.; softs, 21s. 6d.; mediums, 22s. 9d.; hards, 23s. 9d.; bleached, 25s. 3d. spot. RAPE is dull and easy as quoted; refined, about 40s.; crude, 38s. spot. SOYA.—Prices are easier on a dull market; deodorised, 34s.; crude, 31s. spot. LINSEED (raw, naked).—The market has been flat, and values are slightly cheaper on the week. On spot, 43s.; July, 39s. 9d.; July-August, 38s. 9d.; September-December, 36s. 9d. Boiled oil, on spot, 45s. 3d. TURPENTINE.—There has been a renewed improvement in the spot demand here, which has been reflected in considerably larger deliveries, and the tone is steady with spot at 39s. 9d., and about 39s. is quoted for contracts covering the second half of the year. American cable advices were slightly better. London deliveries for last week were 2,564 barrels, making a total since January 1 of 49,105 barrels, which compares with 47,461 barrels for the same period last year. Stocks were decreased to 9,844 barrels. On the other hand, fresh shipments were made, the afloats amounting to 9,475 barrels. This makes the London visible supply 9,319 barrels as against 19,789 barrels a year ago. RESIN.—The lower prices have attracted demand somewhat, but business is still quiet. C.i.f. terms for shipment are as follows:—B, 13s. 6d.; D, 13s. 6d.; E/I, 14s.; K/M, 14s. 3d.; N, 14s. 10½d.; W/G, 15s. 7½d.; and W/W, 17s. 4½d. per cwt.

LUBRICATING, MINERAL AND BURNING OILS, ETC.—Generally easy and slow markets are reported, the one exception being solvent naphtha (90 to 160), for which there has been a good demand, and the market is now firm. Lubricating oils have been very slow, and are easy as quoted. SOLVENT NAPHTHA (90 to 160) has been in good demand, and the market is dearer at 1s. 2d. to 1s. 3d. per gallon, naked at works. Heavy 90 to 190 remains dull at 1s. per gallon, naked at works. LUBRICATING OILS.—The market is still very quiet with the tone easy. Spot: Pales, £9 12s. 6d. to £21; reds, £11 to £21; dark cylinders, £12 5s. to £30; filtered cylinders, £22 to £31 10s. per ton, less 2½ per cent.

The American Tariff

THE new American tariff rates came into force on June 18. In the schedule covering chemicals, oils and paints many increased duties are brought into operation and numbers of articles not formerly included have been added to the lists. Sulphide of arsenic and white arsenic are removed from the free list and duties of 2c. a lb. imposed. Phosphoric acid (formerly 1c.) is now dutiable at 2c. a lb. On magnesium sulphate (Epsom salt) the rate (formerly ½ of 1c.) is ¾c. a lb. On refined sodium borate, or borax, the duty is ⅝c. a lb. (the same), and on sodium chlorate 1½c. a lb. (the same). On the other hand, nitric acid and ammonium sulphate remain on the free list. On eucalyptus oil a duty of 15 per cent. *ad val.* is levied (formerly 25 per cent.). Gum and spirits of turpentine, and resin are removed from the free list and made subject to a duty of 5 per cent. *ad val.* Bleached shellac remains free of duty. After much discussion in the House of Representatives and the Senate, it has been decided in conference that the tariff on menthol shall be 50c. a lb. (the same), on natural crude camphor 1c. a lb. (the same), on natural refined camphor 5c. a lb. (formerly 6c.), and on synthetic camphor 5c. a lb. (formerly 6c.). If at the end of three years the President finds that during the preceding six months the domestic production of synthetic camphor does not exceed 25 per cent. of the domestic consumption, or at the end of four years that during the preceding six months such domestic production had not exceeded 30 per cent. of such consumption, or at the end of five years that during the preceding six months such domestic production had not exceeded 50 per cent. of such consumption, he shall make a declaration accordingly, and six months thereafter the rate on synthetic camphor shall be 1c. a lb.

Trade-Mark Applications

(*From "The Trade Marks Journal," June 4, 1930.*)

"ULTRA-RAYOR"; for surgical apparatus for colds, etc. (11). By H. Gordon (London), Ltd., 8 City Road, Finsbury Square, London, E.C.1. 512,715.

"CAMEO"; for photographic cameras (8). By Ensign, Ltd., 88 and 89 High Holborn, London, W.C.1. 512,491.

"SAINT MUNGO" with design of cross on shield; for surgical dressings, etc. (11). By Baird Bros., 97 Bath Street, Glasgow, C.2. 509,506.

Conventional name-plate design on oblong shape; for all goods (48). By P. P. Mülhens, Glockengasse 26, Cologne, Germany. 509,099. (Associated)

Correspondence

Letters for this section should he written on one side of the paper only. Correspondents may adopt an assumed name for purposes of publication, hut must in all cases furnish their real name and address to the Editor.

Dr. G. Claridge Druce's Eightieth Birthday

SIR,—Will you allow me, since I find it impossible to personally thank the hundreds of those who offered me their kind congratulations upon my eightieth birthday, to use your columns for the purpose? Especially pleasing was it to receive the vote of the president and Council of the Pharmaceutical Society, since it includes not only valued colleagues but warm personal friends, and to them and to my brother pharmacists I beg to tend my hearty thanks and appreciation. The director and staff of the Royal Botanic Gardens and Herbarium at Kew, the director and staff of the Botanical Department of the British Museum, Prof. W. W. Smith, King's Keeper of the Edinburgh Botanic Gardens, the president and Council of the Royal Horticultural Society, of the Ashmolean Natural History Society of Oxfordshire, the Professor of Botany and colleagues of the Paris University, of the Jardin Botanique de l'Etat and University of Brussels, and of Geneva, Zurich, Prague, Copenhagen, Oslo, Bergen, Amsterdam, Vienna, Basle, Harvard, New York, California, Washington, Cape Town, etc., were also among those who sent their good wishes. To these and to my colleagues I offer the most profound thanks, and to you, Sir, for all your too kindly references.

With all best wishes, I am, etc.,

Oxford. G. CLARIDGE DRUCE.

Departmental Committee's Report

SIR,—It is a coincidence that the evidence of the Retail Pharmacists' Union before the Committee of Inquiry into the poison laws (*C. & D.*, June 7, p. 700) should be published in the same issue in which there is a report of a prosecution of a trader for selling boric ointment not of the required standard (p. 686). Although this does not refer to scheduled poisons, one can easily imagine conditions in which such a simple thing might be almost as dangerous, and some of the magistrate's remarks would have afforded good backing to the contention of the R.P.U., notably when in paragraph 8 they say that the principal safeguard to the public is knowledge on the part of the vendor of the properties of the articles he is selling. There are three statements in this report which one would like to see brought to the notice of the general public—" people who buy boric ointment at shops which are not chemists' shops are buying something suspect "; " if people want ointments they should go to chemists' shops where they will get the genuine article "; " why don't you leave chemists to do their own business? " One wonders if the R.P.U will take his worship's hint that he would like these views broadcast. A consideration of these might have induced the Departmental Committee to take a different view of the clause referring to the " listed dealers " other than qualified men.

Faithfully yours,

CORRECTUM (16/6).

SIR,—Mr. W. Marshall Freeman's article (*C. & D.*, June 14, p. 730) dealing with the Departmental Committee's Report comes as a wholesome criticism from one who is a legal authority besides having a knowledge of pharmacy, although no longer connected with it. The quotations from the " Justice of the Peace " bear out the contentions of many of us that according to the provisions of the Bill any and every shopkeeper could be a seller of poisons, and a writer in such a journal should understand legal phraseology if anybody does. In the next quotation a further contention of pharmacists is upheld, namely, that they are, and have been, in no way concerned in the dope traffic, and that an extension of the original Poisons Schedule would have been sufficient to control these drugs so far as they are dispensed or sold by pharmacists. The question regarding the restriction of the sales of poisons exposes the greatest weakness of the report. This Committee was set up presumably to see how accidents and crimes could be prevented by reorganising the methods of the distribution of poisons in order to make it more difficult for them to get into careless or criminal hands; but its recommendations after three years' deliberations amount almost to opening up free trade for all and sundry. Mr. Freeman gives us the plainest speaking that we have had yet regarding the degraded position which pharmacy occupies at the present time; and in the last paragraph of his article he warns us of possible danger when he says that an attempt might be made to rush a short measure through Parliament to set up a Poisons Board without waiting for the other parts of the Bill.

Faithfully yours,

DANGEREUX (23/6).

Unjustified Cheapness

SIR,—According to the report of a recent meeting of the Edinburgh Branch of the Pharmaceutical Society (*C. & D.*, June 7, p. 693), even the Scottish chemists are becoming alarmed at the spread of the activities of welfare centres and clinics, and the corresponding loss of business. Not even pharmacists would complain if these institutions confined the distribution of the various commodities to persons really necessitous; but apparently they are finding out in Scotland, as we have long ago found out south of the Border, that this is not so, and that many people who are in comparatively comfortable circumstances make use of these cheap sources of supply, and do not in the least mind telling the chemist that they can get certain goods at cheaper rates than his. There is no doubt that in some parts the retail chemist has completely lost the sale of infants' foods, almost entirely owing to this rate-aided competition; and it would be an interesting comparison to know the comparative figures for the retail turnover of foods before the institution of the centres and to-day. What is wanted is some definite regulation laying down the limit of income of the persons using these places, and for that limit to be strictly adhered to. Even the so-called middle class, which is supposed to be able to look after itself, does not hesitate to make use of the service provided, although perhaps under modern conditions some of them do not earn so much as the working class.

Yours truly,

CENTRALISE (24/6).

Subscribers' Symposium

For interchange of opinion among "C. & D." readers and brief notes on business and practical topics.

Appreciation

I beg to offer you my very best thanks for the trouble you have taken in supplying me with the information I required. My gratitude for your painstaking search and patience in the matter is very genuine, for the information I have received through you will be of great service to me.—*C. F.* (18/6).

" English Salts "

It is interesting to read that the old-fashioned smelling salts were known to foreigners as English salts (*C. & D.*, June 7, p. 697), as the term is now used in parts of the Continent for quite a different and more common chemical; a customer asking for " Sel Anglais " would receive Epsom salts, commonly known to-day as English salts.—*Salis* (17/6).

Dispensing Notes and Difficulties

An Unavoidable Precipitate

SIR,—We shall be glad if you can solve, or help us to solve, a dispensing problem. The very small quantity of mixture in the bottle sent you herewith, and sediment, is a result of the following mixture:—

Calc. bromid., Sod. bromid.	...	...	aa.	gr. 80
Tr. valer.	...	...	...	♏. 170
Ext. glycyrrhiz. liq.		...	...	♏. 170
Aq. dest.	...	...	ad	℥viij.

Sometimes the black deposit is worse than others; it develops on standing.

Yours faithfully,

B. (28/3).

[This mixture is bound to deposit. The offending constituent is calcium bromide, which will give a copious precipitate with either simple tincture of valerian or liquid extract of liquorice, however much either of them is previously diluted with water. Two grains of calcium bromide in an ounce of water added to fifteen minims in five ounces of water of the organic constituent will precipitate, Sodium bromide is miscible without trouble, but tincture of valerian, because of its volatile oil and extractives, will form a more or less cloudy mixture. Make the mixture as follows:—Mucilag. acaciæ, ℥iss.; aq. destil., ℥iij.; mix and add to this tr. valerian. simp., ♏.170; ext. glycyrrhiz. liq., ♏.170. Dissolve the two bromides in two ounces of distilled water, mix with the above, transfer to an eight-ounce bottle and fill up to eight ounces with water.]

Legal Queries

A. H. (19/6).—The inclusion of the words "obtainable only direct from" imply a claim to an exclusive right in the preparation, and consequently would render the article liable to medicine-stamp duty.

S. C. L. (16/6).—Barium nitrate comes within Part II of the Poisons Schedule, and the sale of this salt or of preparations containing it, e.g., in the form of a solution, is restricted to qualified chemists.

E. P. (21/5).—Liability to medicine-stamp duty would be involved by the use of the titles "Blood Purifier" and "Neuralgia Mixture" on the labels enclosed with your letter. The use of the titles "Red Star Embrocation" and "Bronchial Mixture" would not involve liability to medicine-stamp duty. As regards the labels for "Compound Glycerin of Thymol" and "Indigestion Mixture," to avoid liability to medicine-stamp duty it would be necessary to comply with the Order by the Commissioners of Customs and Excise of March 1, 1930, which was published and commented upon editorially in our issue of March 8, p. 300.

Cado (11/6) wishes to know whether a tonic wine having an old port as basis, and containing in certain proportions quinine, kola and gentian, can be sold by chemists and druggists not holding wine licences as a medicated wine, or is it necessary that it should contain a particular proportion of quinine or some other medicament? [There are two aspects under which this has to be considered—from the Customs and Excise and from the magistrates' points of view. If the preparation is genuinely medicated and from its composition and dosage can be seen not to be intended for use as a beverage, the excise wine licence will not be required to be taken out. It would be well to make inquiry on this point from the Board of Customs and Excise, Custom House, London, to whom a sample should be sent with particulars. But even if no excise licence were required, this would give no protection against proceedings by the police unless the appropriate magistrates' wine licence were held by the chemist selling. in view of the decision in the recent Brighton case.]

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for, and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

A. A. W. (27/5).—INSECTS FOUND IN NEW HOUSE.—The insects you have sent us appear to be *Coninomus nodifer, Enicmus minutus* and *Cryptophagus acutangulus*. They are recognised by entomologists to be fungus feeders, and occasionally appear in new houses. They may disappear in the course of some months, but, on the other hand, if complete dryness cannot be obtained, they may increase to a considerable extent.

W. R. (7/58).—VANISHING CREAM.—A series of articles on the subject of vanishing creams appeared in the following issues of the *C. & D.*: June 27, 1925, p. 925; June 25, 1927, p. 780; July 9, 1927, p. 62; July 16, 1927, p. 89. The standard formula is:—

Ac. stearic.	...	...	...	℥j.
Liq. ammon. fort.	...	. .	...	♏vij.
Aq. dest.	...	...	...	℥j.

The method of making should be strictly followed. Add the stearic acid to half the water and liquefy. Remove the source of heat and stir in quickly the remainder of the water to which has been added the ammonia. If it granulates, re-heat. Incorporate with the above cream:—

Sap. animalis	...	...	...	gr. x.
Aq. dest.	...	...	...	℥j.

Dissolve and triturate for 10 to 15 minutes until a thin cream is produced. Allow to stand for twenty-four hours for the sheen to develop. Repeated trituration may be necessary with non-crystalline stearic acid to develop the sheen. Add:—

Glycerin	...	...	...	♏xx.
Muguet perfume	...	...	...	♏v.

If the sheen is not desired do not triturate. Packing of this cream requires more attention than is often given to it. Usually it is placed in jars where the lid fits loosely and the result is evaporation of the water and shrinkage follows. The best packing we have seen is in collapsible tubes.

An alternative formula would be:—

Acid. stearic.	...	...	...	℥ij.
Sap. animalis	...	...	...	℥iij.
Liq. ammon. fort.	...	...	...	♏xl.
Aq. dest.	...	...	...	℥x.

The bad tinting of some creams is due to poor stearic acid. Only the best crystalline variety should be used.

Roy and *A. N. Other* (6/6).—FLY PEST.—Formulas of the type you desire are as follows:—

I		II	
Insect powder	8 oz.	Insect powder	8 oz.
Paraffin	1 gal.	Paraffin	½ gal.
Methyl salicylate, Eucalyptus oil or Safrol	1 oz.	Petrol	½ gal.
		Naphthalene	1 oz.

Macerate the pyrethrum in the paraffin for forty-eight hours, strain and add the other ingredients.

Retrospect of Fifty Years Ago

Reprinted from "The Chemist and Druggist," June 15, 1880

A Gift Scheme

In a chemist's shop just opened in the North of London appeared a placard announcing that the proprietor was prepared to distribute gratis in the first month 10,000 soothing powders for children cutting teeth. A gay young bachelor, who went in on the Saturday night for a pennyworth of bear's grease, was presented with one of these powders. He tried to "swop" it for a bottle of lavender water, but failed. He thought the perfume would have been of more immediate interest. . . .

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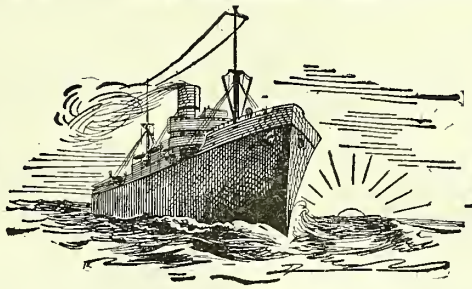
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Falling Hair
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KOTALKO
TRUE HAIR GROWER

The Public is asking for

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KOTALKO SOAP
1/6 tablet, 13/6 "
P. A. T. A. Prices.

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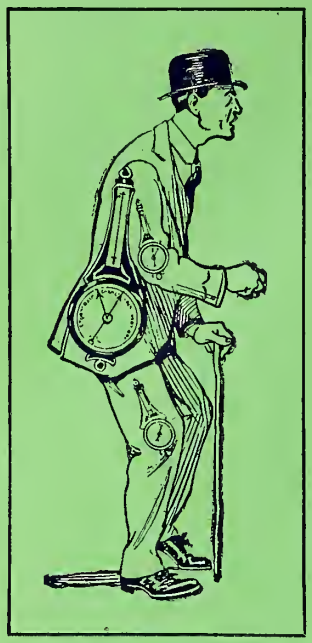
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THE CURATIVE BATH POWDER

Relieves Rheumatism, Insomnia, Influenza, Etc.

For Hydropathic Treatment at Home

"TYTOXA" contains 50% TITANIUM DIOXIDE

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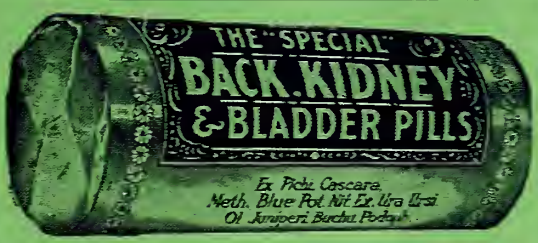
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SEND FOR LEAFLETS & FULL PARTICULARS.

RETAIL
10½ pkt.
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(They cost 5/6 doz., and thus show 9½d. profit)

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A 30/- assorted order shows

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Through your Wholesale House or from—

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LICORICINE is an old fashioned reliable remedy for coughs and colds that has held the public's confidence for over 60 years. Your customers know it—their fathers knew it before them. Show it and they will buy it.

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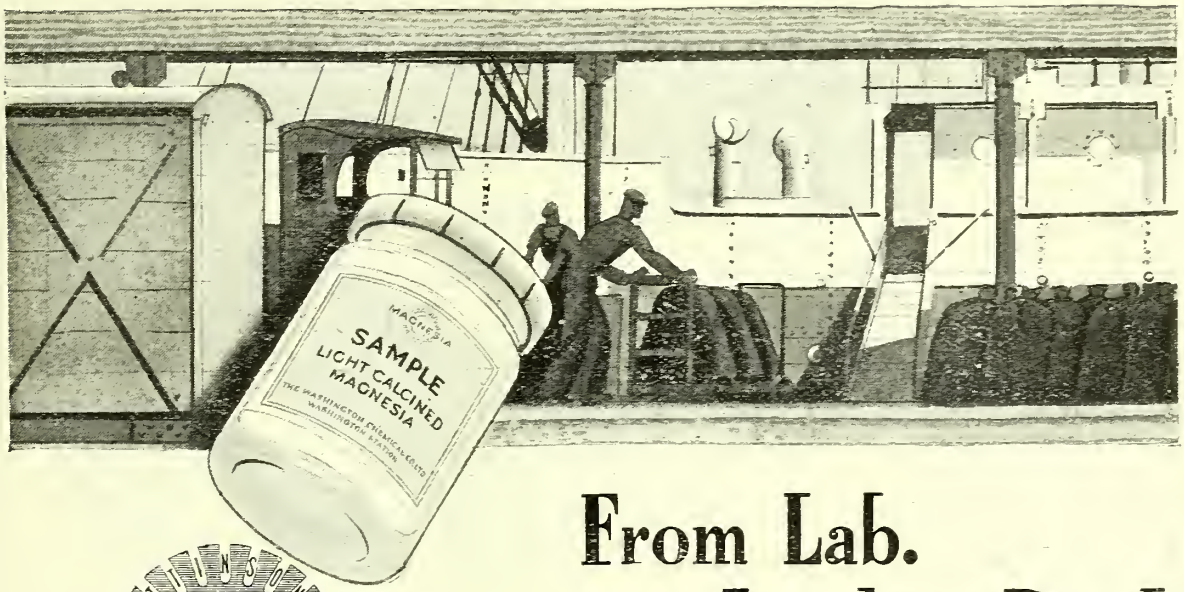
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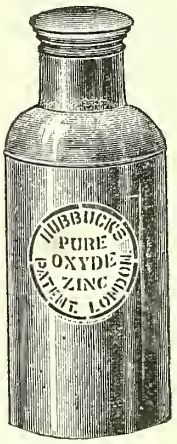
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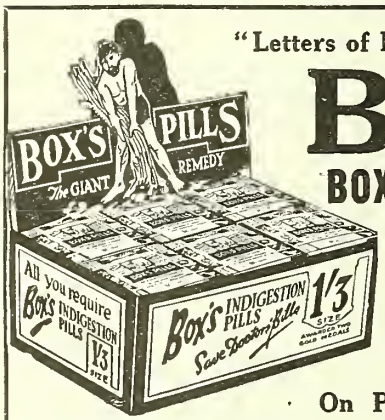
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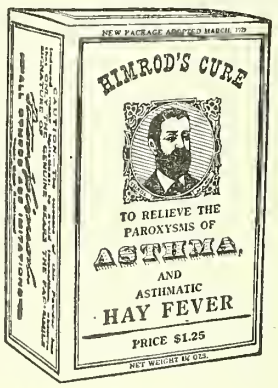
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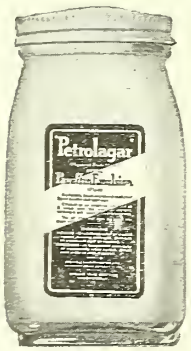
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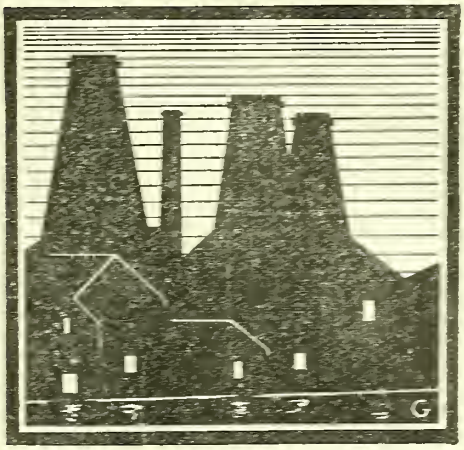
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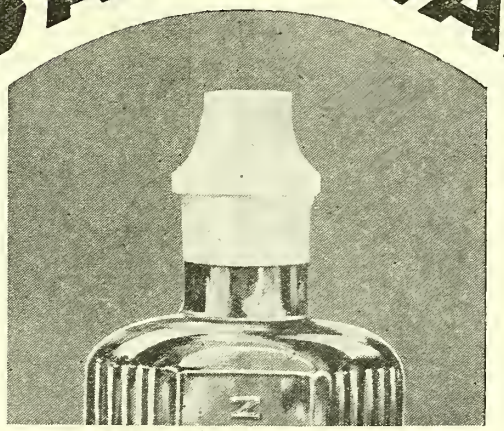
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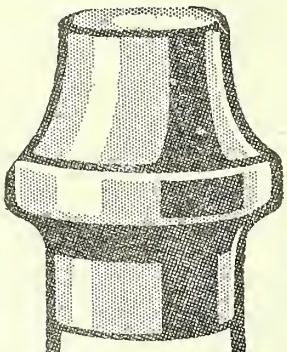
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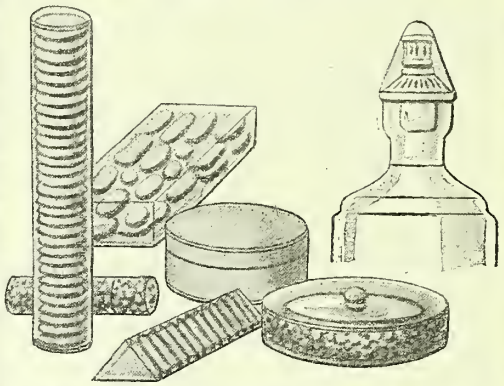
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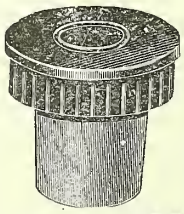
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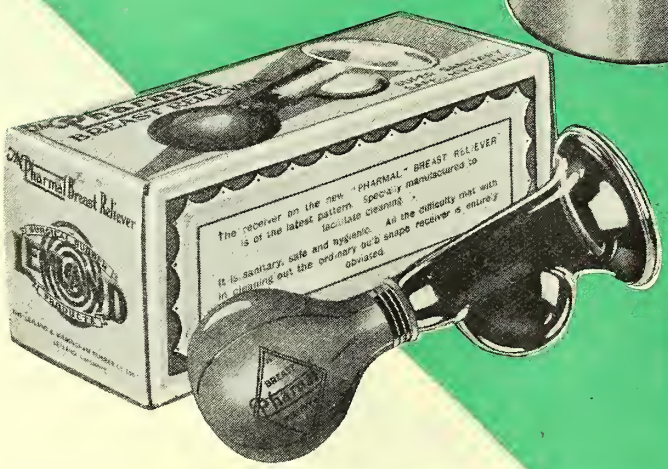
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WHY PHARMAL IS BETTER

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Available in Red, Green, Blue, Pink ; also Red and Blue Marble, Blue and Green Marble, Green and Red Marble and Jazz.

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COMPRESSED DRESSINGS—of great convenience where storage room is limited.

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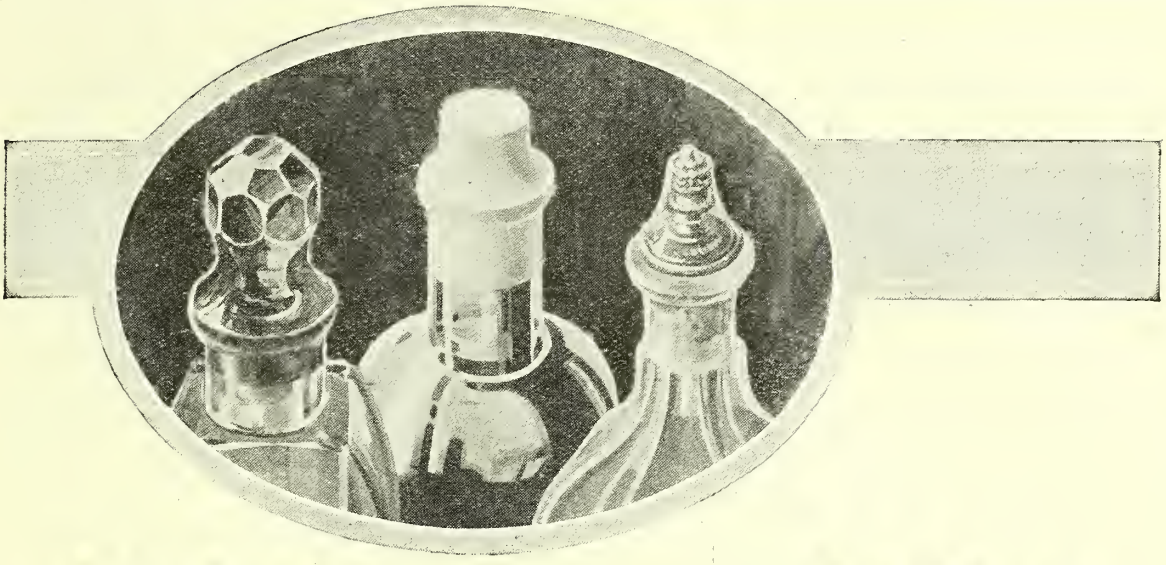
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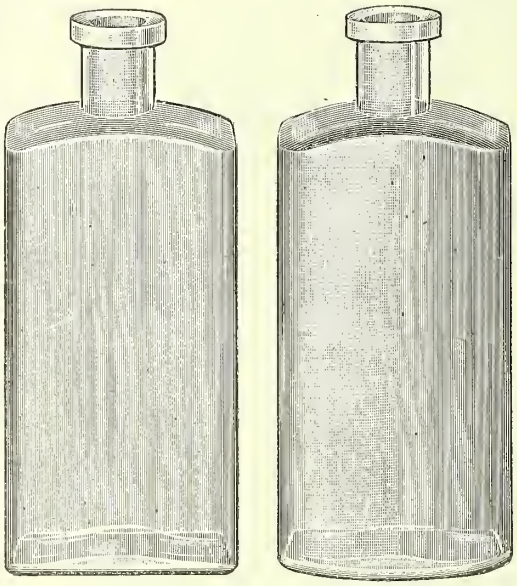
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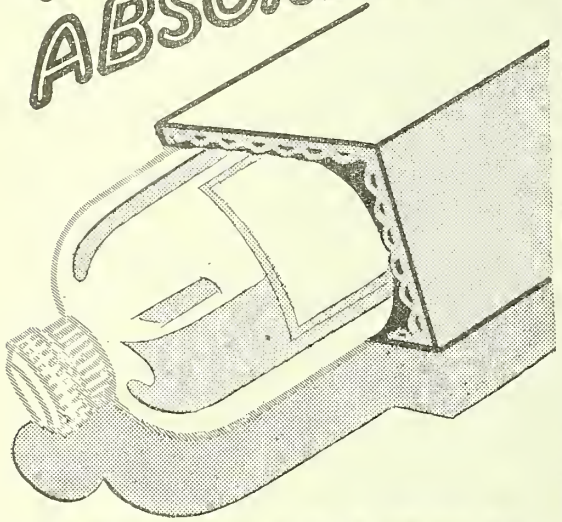
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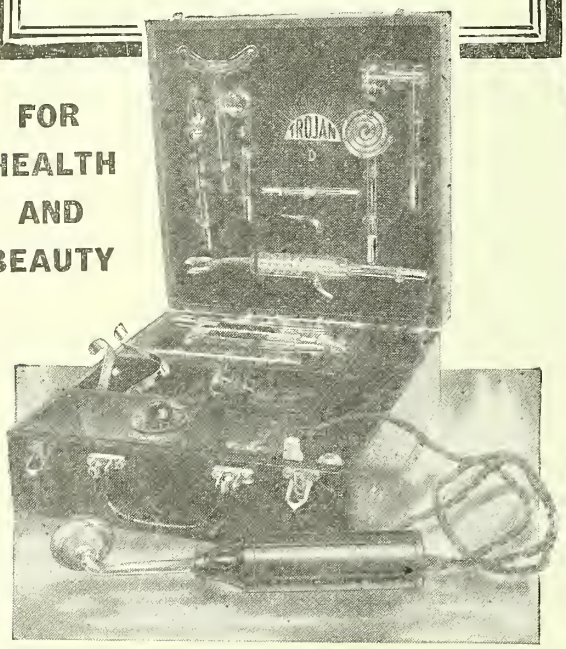
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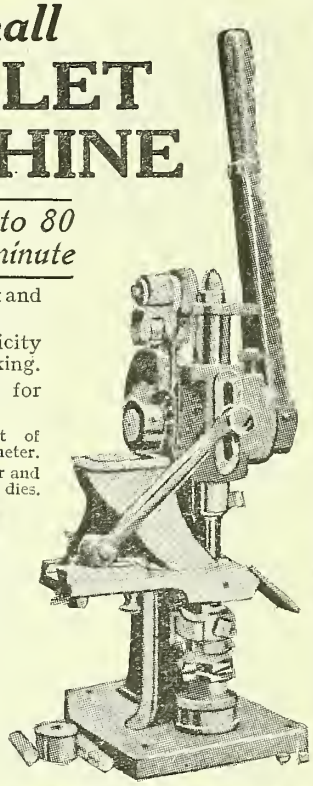
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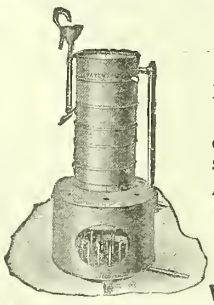
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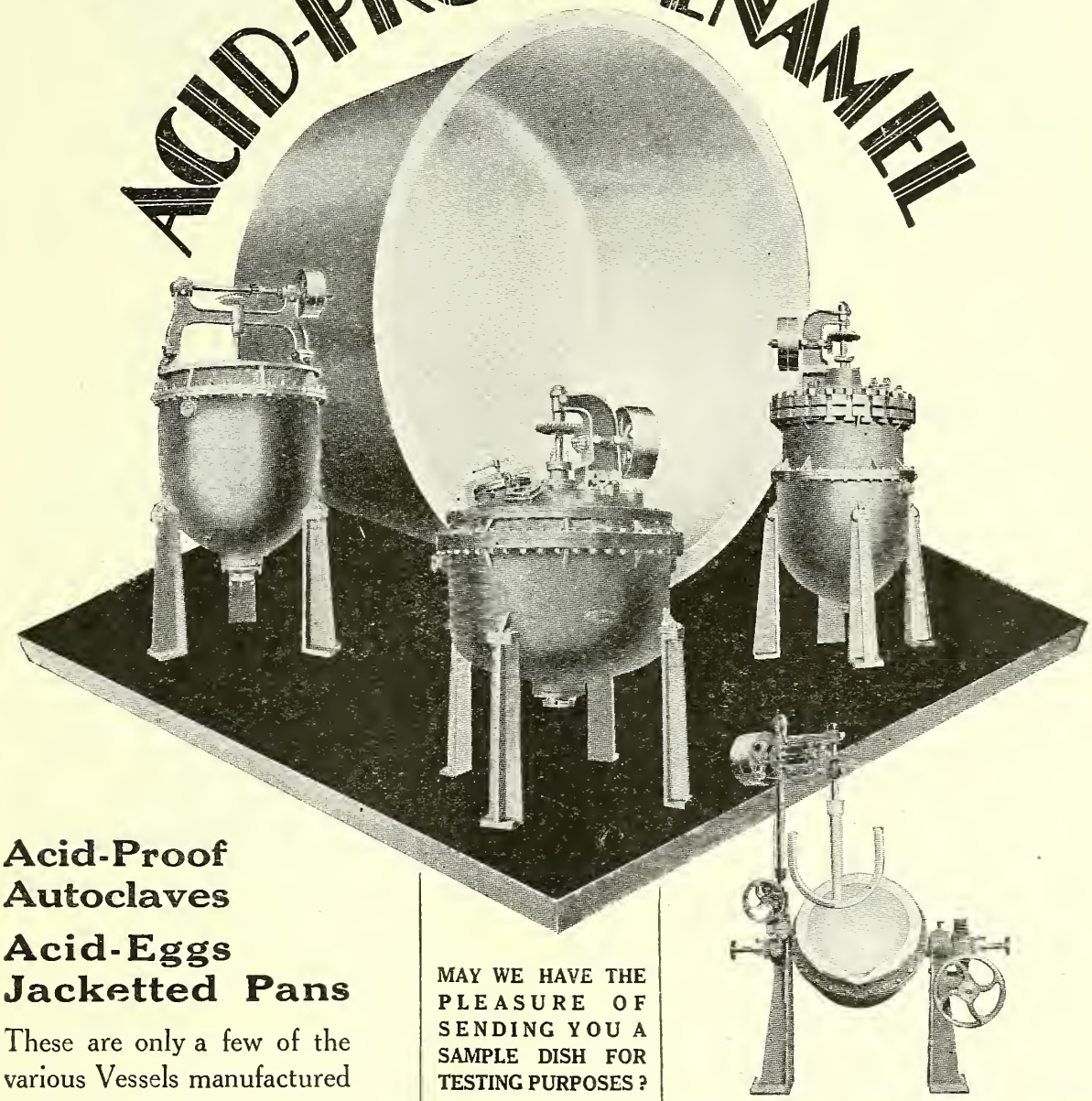
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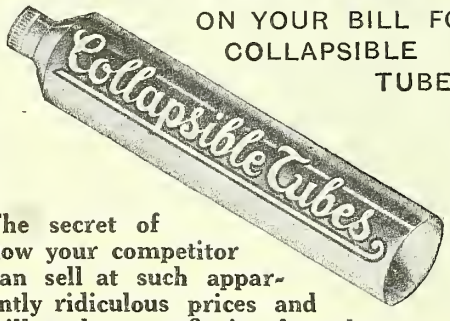
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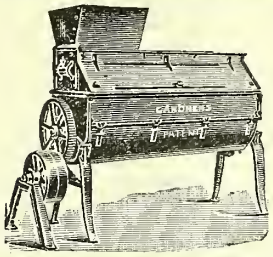
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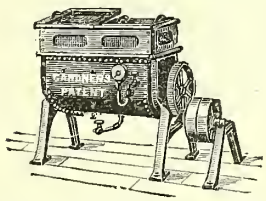
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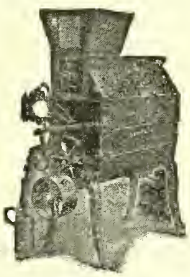
GARDNER'S PATENTS



Gardner's Patent "Rapid" Sifter and Mixer for all kinds of Dry Powders.



Gardner's Patent "Rapid" Dryers for removing Moisture from Powders, Chemicals, etc.

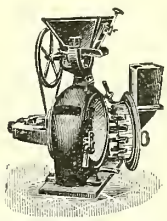


Gardner's Patent "Rapid" Sifter, Mixer and Sprayer for Adding Essences, Perfumes, etc., to Powders.

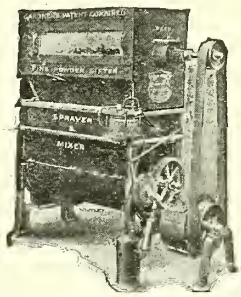
cover the whole field of REDUCING, SIFTING, MIXING AND DRYING OF ALL POWDERS with such adequacy and perfection as to remove the element of doubt from all those processes.



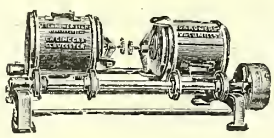
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Combined "Rapid" Grinder and Sifter for Drugs, Chemicals, Leaves, Roots, etc.



Gardner's Patent Combined Fine Powder Dresser, Liquid Sprayer and Mixer for Fine Perfumed Powders, Beauty Powders, etc.



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TOOTH BRUSHES, &c.

Cellophane protects, beautifies, and adds the quality touch to all goods wrapped in it.

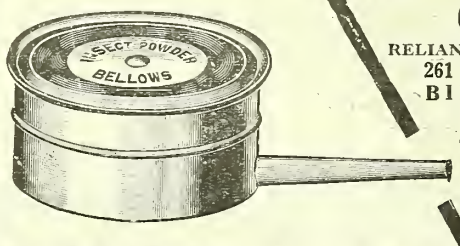
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Ask for Samples and Prices.

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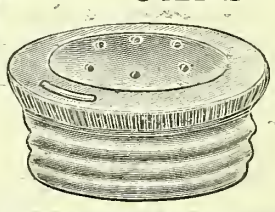
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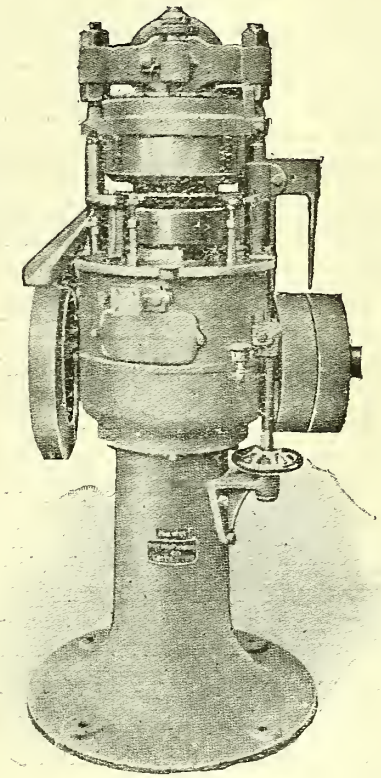
12 Punch Ordinary, $\frac{3}{8}$″ to $\frac{7}{8}$″ diam.
Output 300 per min.

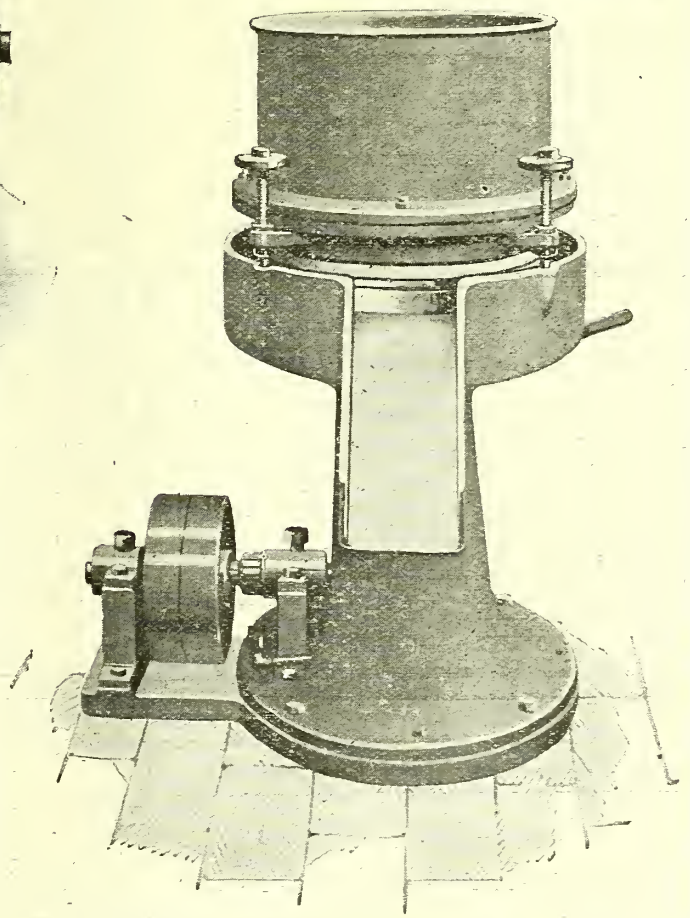
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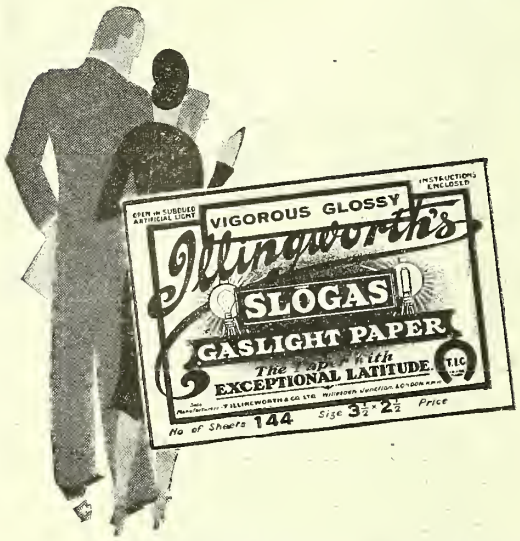
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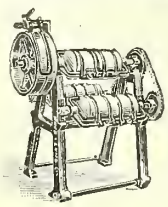
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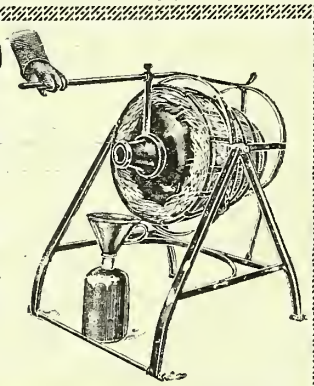
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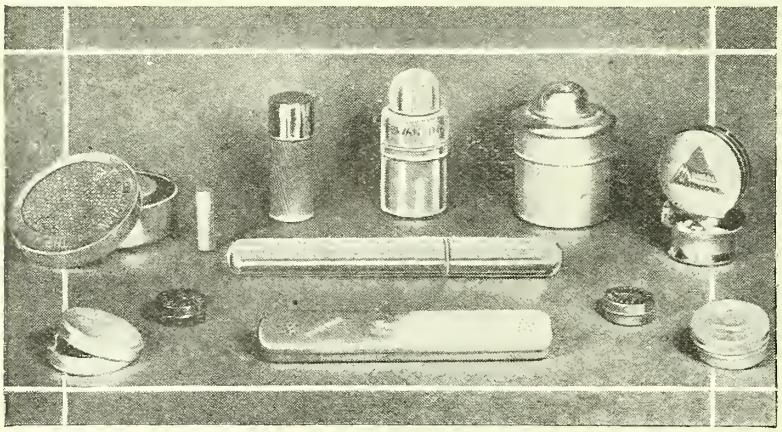


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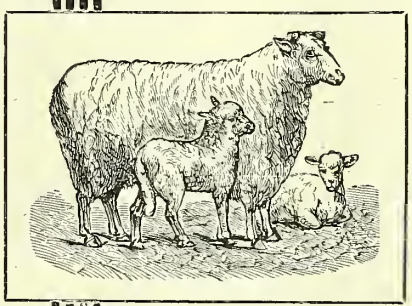
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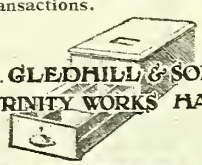
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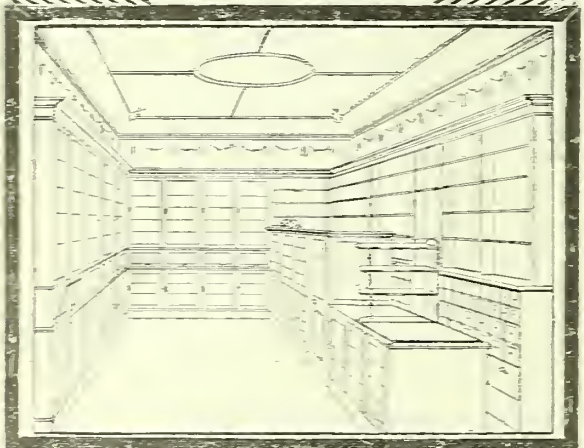
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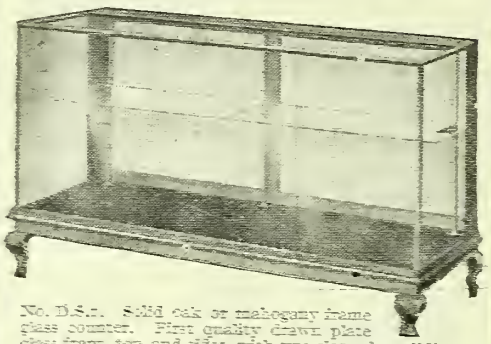
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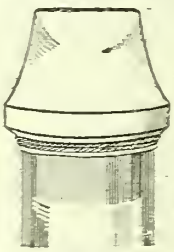
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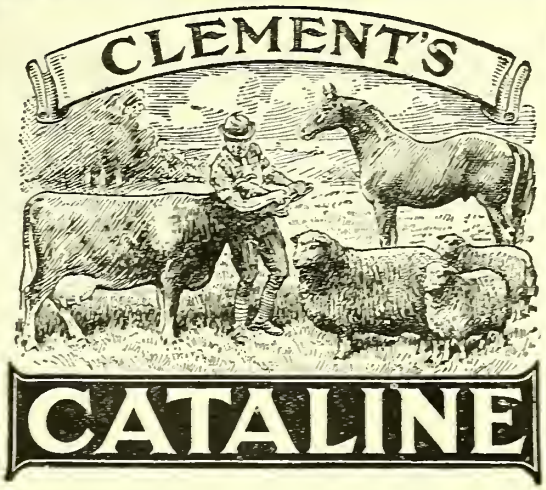
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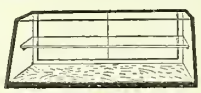
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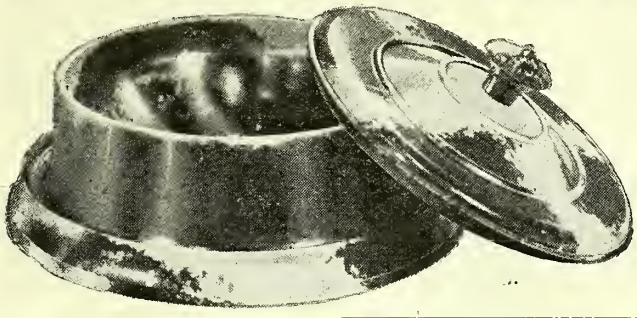
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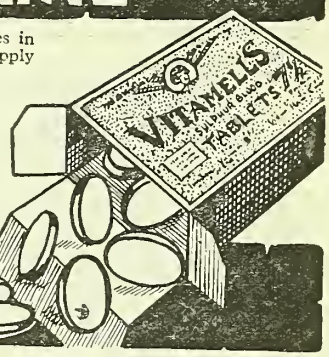


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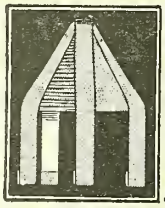
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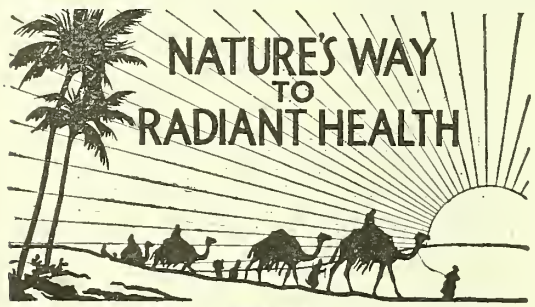
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THE CHEMIST AND DRUGGIST SUPPLEMENT

28 ESSEX ST.
LONDON, W.C.2

JUNE 28, 1930

This Supplement is inserted in every copy of The Chemist & Druggist.

THE CHEMIST AND DRUGGIST SUPPLEMENT

REVISED ADVERTISEMENT TARIFF.

Businesses Wanted and for Disposal, Premises to Let, Goods for Sale and Agencies—6/- for **50** words; every additional **10** words or less, **6d.**

SITUATIONS OPEN—6/- for **40** words; every additional **10** words or less, **6d.**

SITUATIONS WANTED—2/- for **18** words; every additional **10** words or less, **6d.**

Legal Notices, Tenders, Auctions, and all specially-spaced announcements, **1/3** per nonpareil line (12 lines = 1 inch single column).

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EXCHANGE COLUMN (for Retailers, etc.)—**Twopence** per word, minimum **2/-.**

BOX NUMBER.

In each case replies may be addressed to a registered number or nom-de-plume, c/o this Office, **at a charge of 1/- extra for each** advertisement.

PAYMENT.

All Advertisements are prepaid, so that remittance must accompany instructions in each case. If it be necessary to telephone or telegraph an urgent announcement this may be done, provided the money is telegraphed at the same time.

THE CHEMIST AND DRUGGIST, 28 Essex Street, Strand, LONDON, W.C.2.

Telephone Central 6565 (8 lines). Telegrams: "Chemicus, Estrand London."

CLOSING FOR PRESS.

ALL ADVERTISEMENTS INTENDED FOR INSERTION IN THIS SUPPLEMENT

MUST REACH US NOT LATER THAN **FIRST POST THURSDAY MORNING.**

CHEMISTS' TRANSFERS.

Messrs. Orridge & Co., 56 Ludgate Hill, E.C.

Telephone No.: CITY 2283.

May be consulted at their Offices on matters of Sale, Purchase and Valuation

1.—LONDON, S.E.—General Retail and Dispensing Business, recently established; returns last week approximately £40; the returns are increasing every week; double-fronted shop; flat over; property could be purchased on mortgage; price of business about £500.

2.—CENTRAL LONDON.—General Retail and Dispensing Business, with Kodak Agency; returns last year exceeded £3,000; present rate £65 weekly; gross profit 40 per cent.; double-fronted shop, well fitted in mahogany and fully stocked; rent £200; lease 18 years; terms, valuation of stock and fixtures, plus an agreed sum for goodwill, about £2,000 in all; this is a genuine business and worth attention.

3.—LONDON, W.—General Retail and Dispensing Business, with N.H.I. and Kodak Agency; returns average £2,800 per annum; double-fronted shop, very well fitted and amply stocked; very good living accommodation; held on lease at ground rent of £8 per annum; valuation terms entertained.

4.—LONDON, S.W.—General Retail and Dispensing Business; returns at present approximately £1,000, under manager aged about 70; sub-let approximately £90; price £600, or offer.

5.—METROLAND.—Good-class Retail Business, with Kodak Agency; returns last year about £2,300, with scope for further increase; corner shop, well fitted and stocked; there are two flats, one of which is sub-let at £55 per annum; vendor owns property, and will sell same or grant a lease at a rental to be agreed; price to be arranged.

6.—ESSEX (Suburban).—General Retail and Dispensing Business, with N.H.I. and Kodak Agency; returns present rate approximately £27 weekly; double-fronted shop, well fitted and stocked; living accommodation; garden; rent £100; long lease; price £630.

7.—WANDSWORTH, S.W.—General Retail and Dispensing Business; returns, last year, under management, exceeded £2,000, with net profit £530; scope for increase under personal supervision; rent £120 per annum; sub-let £95; long lease; price £1,500. £1,000 down and the balance by instalments.

8.—SUSSEX COAST.—Good-class Retail and Dispensing Business, established many years; returns exceed £2,850, with gross profit approximately £1,200; double-fronted shop, well fitted and stocked; extremely good house, which can be sub-let to cover the whole of rent if so desired; long lease; price to be arranged; this business offers scope for increase under more modern management.

9.—CENTRAL MIDLANDS.—General Retail and Dispensing Business, with Kodak Agency and large D. & P. connection; returns last year £3,802, under management; very good profits; double-fronted shop, well fitted and stocked; reasonable rent; lease has 16 years unexpired; price £3,000.

10.—KENT.—Old-established General Retail and Dispensing Business; returns over £3,000 per annum; good profits; the shop is well fitted in mahogany and fully stocked; held on lease at low rental; further details on application.

11.—SOUTH COAST.—Cash Retail and Dispensing Business; returns last year £3,255, with net profit £940; large double-fronted shop with five windows; well fitted and stocked; eleven-roomed house, with greenhouse and private entrance; rent £250; new lease; price £3,000.

12.—CORNWALL.—Retail and Dispensing Business, with Kodak Agency; very old established; returns last year £2,160; net profit approximately £500; scope for increase; stock and fixtures estimated to be worth £1,150; double-fronted shop; held on lease; price about £1,400.

13.—BRIGHTON.—General Retail and Dispensing Business; returns £2,000 per annum; net profit about £450; rent £160; sub-let £95; held on lease; stock and fixtures estimated to be worth £1,250; price £1,450.

14.—DORSET.—Cash Drug Store, with Post Office and Tobacconists; returns from Drug Store £1,500 per annum; combined net profit £450; living accommodation; new lease will be granted; price asked £1,500; part payment entertained.

Messrs. O. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone **Profit, the Value of Business, &c.,** can be determined. Involving as this does the labour of stocktaking and Valuation it is often omitted and eventually becomes confusion and loss.

Valuations for Stocktaking

Messrs. O. & Co. are prepared to undertake these essential duties and make **SPECIAL TERMS** for such service.

ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.4

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STOCK-TAKING

Ernest J. George

LET ME KNOW YOUR DIFFICULTIES. I AM SURE I CAN HELP.
ALL CORRESPONDENCE IN STRICTEST CONFIDENCE.

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WALSALL

'Phone : 3774

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Business Agency, Transfer & Valuation Department

Head Offices—**Kimberley House, Holborn Viaduct, London, E.C.1 (and at 2 Birketh Street, Liverpool).**

PARKIN S. BOOTH, *Valuer.* *'Phone: City 1261-2-3*

BUSINESSES FOR DISPOSAL

1.—LONDON, S.W.—Old-established Chemist's Business, held on lease 8 years at £56 p.a.; let off £91 p.a.; returns average £17/20, under management; premises consist of double-fronted shop with two rooms behind; price for lease and goodwill, £150; fixtures, etc., £150; stock at valuation, approximately £350. Further particulars on application. (43)

2.—LONDON, N.7.—Old-established Optical Business, combining recently established Pharmacy, held on lease with 14 years to run at a rental of £250 p.a., of which £135 is let on lease; returns £28 per week; very large shop, dispensary and sight-testing room, situate in busy main road; no opposition for some distance. Further particulars on application. (42)

3.—LEEDS.—Old-established Business for quick disposal, situate in busy main thoroughfare; returns average £30 per week; property for sale, consisting of 2 houses and one shop; one house sub-let at 10s. 6d. per week; price for property £950; price for business £550, all at. Further particulars on application. (37)

4.—LIVERPOOL.—General Retail Business, with N.H.I.; established many years; turnover for year ended March 31 £1,340, plus N.H.I. £380; with capable supervision this could be considerably increased; tenancy yearly at rental of £75 per annum, plus rates; price asked £500, plus stock at valuation (approximately £475). (40)

5.—LONDON, S.W.—Recently-established Retail Dispensing Business premises on 15 years' lease at £150 per annum, of which part is sub-let at £104 per annum; returns 1929, £1,932, all cash; Kodak and U.C.A.L. Agencies; price for quick sale £1,100 all at, or £750, plus s.a.v. (approximately £425). (41)

6.—LINCS.—Established Dispensing and Retail Business for quick Disposal in important town; 17½ years' lease to run at £200 per annum; returns average £50 per week; very large shop, situate in main thoroughfare; specially recommended.

7.—SURREY.—Good-class, well-established Family Retail Dispensing Business, with Kodak Agency; situate in high-class residential suburb, premises consisting of corner shop with excellent dwelling accommodation; held on lease 14 years at £150 per annum; shop well fitted and up-to-date high-class stock carried; returns average £40 per week; price for quick sale £2,000, or £500 lease and goodwill, plus stock and fixtures at valuation. (36)

BERDOE & FISH

CHEMISTS' VALUERS AND TRANSFER AGENTS,

41 Argyle Square, KING'S CROSS, W.C.1

(One minute from St. Pancras and King's Cross Stations.)

1.—BOURNEMOUTH.—Good Light Retail Dispensing and Photographic Business, in fast growing residential district; plenty of scope; net profit averages £500; modern pharmacy, with house; owner retiring; price £1,500, or offer.

2.—HAMPSHIRE (Market Town).—Good-class Family Retail and Dispensing Business; returns average £1,830; audited accounts; modern pharmacy; good position; fully stocked; good house; price £1,250, or close offer; worth attention.

3.—SOUTH COAST.—Good-class Retail Dispensing and Photographic, in main shopping street, close to sea; returns under manager £2,000; good profits; large shop, modern fitted and fully stocked; price £1,500.

4.—YORKS (W. Riding).—Old-established Light Cash Retail, in busy town; returns £2,135 last year; net profit £533; books audited; same hands 38 years; retiring; price £850, little above valuation.

5.—WEST MIDDLESEX.—Profitable Cash Retail, with large Panel, and increasing; present returns £45 to £50 weekly; no near opposition; densely-populated district; modern pharmacy with house over; price £1,500, or offer.

6.—NORFOLK.—Unopposed Mixed Village Business, returning last year £1,059; sole cause of sale health reasons; good eight-roomed house, garage and over quarter-acre of fruit and flower garden; stock and fixtures worth £500; price £600.

7.—LONDON, E.C.—Good-class City Business, for sale through ill health; returns last year £3,256; audited books; long lease; well fitted and fully stocked; price £2,800.

8.—NORTH LONDON.—Old-established Light Retail, with Photo and Optics; returns about £1,950; net profit £560; held on lease at low ground rent; fully stocked; price £1,750.

9.—LONDON (Essex Suburb).—Light Cash Retail, with Photo and N.H.I.; returns over £3,600; audited accounts; no immediate opposition; good stock; price with freehold £3,200; recommended.

10.—LONDON, S.E.—Sound Cash Retail, with Kodak Agency and N.H.I.; returns £1,560; net profit £480; audited accounts; house attached; low rent; long lease; fully stocked; price £1,150.

11.—HACKNEY.—Profitable Light Cash Retail, with N.H.I. and Photo; present returns £1,500; good profits; large shop; good position; well stocked; price £850; trial allowed.

Estab. 1870. Telephone: Terminus 3574.

BANK LOANS to CHEMISTS

When Buying A Business or Partnership Consult Us ——

We are not Transfer Agents, but we arrange GUARANTEED LOANS with the LEADING BANKS for qualified Chemists who require Capital.

The Banks charge 1% over Bank Rate (minimum 5%).

Repayment of Loans can be spread over 5, 6, or 7 years. (Note: Income Tax Abatement may be obtained on the Interest paid, thus bringing the present Net Interest Rate down to 4% per annum approx.)

NO PERSONAL SURETIES or GUARANTORS are required. We arrange the necessary guarantees by insurance with a FIRST CLASS INSURANCE COMPANY for whom we act as SOLE AGENTS for this business.

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THE SHOP *for* YOUR TRADE IS READY!

ATTRACTIVE Freehold Business Premises, with Flats above, close to newly developed residential area where shops are urgently needed

IN IMPORTANT MAIN ROAD POSITIONS AT

NEW BARNET & KINGSBURY

HERE IS YOUR GREAT OPPORTUNITY

Write NOW for full Details and Particulars of LIBERAL ADVANCES

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Invite Correspondence re Purchase or Sale of Businesses, Stocktaking, etc.

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135 Queen Street, Newton Heath, MANCHESTER

Liverpool (near), returns £1,400 p.a., house, price £750.
Manchester, returns £1,150 p.a., main road, house, price £450.
Others, Cheshire, Blackpool, S. Yorks, Norfolk, Peak District and S. Wales.
"Valuations by fully qualified staff." (*Tel.: Failsworth* 113.)

DRUG STORES in important Yorkshire town at £150 and £400, also one in Lancashire £650. Chemist's Business in Yorkshire £550, also one at £1,000. *Further particulars apply:*

CHARLES E. NAYLOR, F.N.A.A

CHEMISTS' VALUER
170 VESPER ROAD, KIRKSTALL, LEEDS
'Phone: Horsforth 324.

CHARLES C. MARSDEN

Chemists' Valuer, Transfer Agent & Stocktaker,
29 Oakwell Crescent, Oakwood, Leeds

LEEDS.—Pharmacy, main road, industrial area, Kodak agency, big N.H.I., net profit about £6 weekly. Price £295. Splendid chance for a young man.
HUDDERSFIELD (near). Returns £1,400, Lock-up, Stock to suit purchaser, about £500. SHEFFIELD.—Old-established Drug Store, small house, doing about £15. Price £350.

BUSINESSES WANTED.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

DRUG Stores or Pharmacy; either lock-up or with living accommodation, with scope for increase; advertiser wishes to purchase by deposit and balance by instalments; please give usual particulars, etc., in strict confidence. 155/31, Office of this Paper.

WANTED, Chemist or Optical business in Cheshire; neglected or unopposed; about 25 miles from Manchester. 156/29, Office of this Paper.

WANTED, Drug Store or business where qualification is not essential; country preferred. 155/32, Office of this Paper.

AGENCIES.

AGENT, calling Perfumery Departments, Chemists and Hairdressers, to carry free selling side line on commission; not toilet preparation; retail only. 155/23, Office of this Paper.

FIRST-CLASS Selling Line required by Traveller with a live connection, Chemists and Stores, covering the five Northern Counties, Yorks, Durham, Northumberland, Cumberland and Westmorland. 152/34, Office of this Paper.

IMPORTERS of Pharmaceutical Specialities and Proprietary Medicines, established 7 years, with connections in the domestic trade, want offers from a few first-class English or Continental firms desirous of developing their businesses; English and Spanish correspondence; exclusive territory; bankers' references. Isaias G. Lopez & Co., Box 899, Bogota, Colombia, South America.

IRISH FREE STATE.—Pharmacist, good personality, first-class managerial and sales experience, possessing initiative, creative ability and sound knowledge of the markets, is anxious to hear from British and Continental firms of importance regarding Agencies; can influence good business. 154/27, Office of this Paper.

SCOTLAND.—Advertiser, with office in Glasgow and connection amongst Wholesale Druggists in Scotland, is open to consider sale of further articles, either as merchant or agent. 173/158, Office of this Paper.

SWEDISH Firm wishes to get in touch with Suppliers of Bandage Muslin and Cut Muslin Bandages, in packets and loose. Write to "H. C.," 9303 Rudolf Mosse Hamburg 1. Germany.

BUSINESSES FOR DISPOSAL.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

EAST LANCASHIRE TOWN.—Chemist's Business for Sale; Kodak Agency, N.H.I.; established 9 years; well stocked; good reason for selling; taking up Wholesale; fine position; corner premises; gold mine for qualified man, but can be developed; both windows main roads; no competition; low price for quick sale; £300, or nearest offer. 156/13, Office of this Paper.

MORECAMBE.—Very old-established cash Drug Store Business, with good living accommodation, excellent position, with freehold property; Kodak Agency; good opportunity for qualified man. Haworth, Drug Store, Queen's Square, Morecambe.

NORTH-WEST Coast Seaside Resort.—Recently-established Pharmacy, with Kodak; double-fronted corner premises; rapidly growing district; opportunity for qualified for N.H.I. and Optics; owner must relinquish for family and private reasons; new fittings and stock; price, approximately £550; property (new) for Sale; mortgage can be arranged; modern house, nine rooms, suitable visitors or let off; only those with necessary capital need apply. 154/37, Office of this Paper.

SOUTH COAST (not Brighton or Bournemouth).—New Pharmacy in new district; taking £16 per week; stock and fixtures £445; no goodwill; nice house, garden and garage; owner would like business in London. 154/36, Office of this Paper.

SOUTHPORT, LANCASHIRE.—By order of the executors, old-established Chemist and Druggist Business, having Wine and Spirit Licence, and living accommodation; situated in thickly-populated part of town; well recommended by the agent. Apply Daniel Halsall, 21 Hoghton Street, Southport.

WEST MIDDLESEX (in good residential district).—High-class Family Retail and Dispensing Business for Sale through retirement; turnover about £2,500; easily worked; books audited by chartered accountants; convenient house and garage; well-appointed pharmacy; price £2,000; only cash buyers entertained. Apply "Retiring," 173/156, Office of this Paper.

CHEMIST'S Business for disposal; main shopping centre of best residential suburb of large northern town; established 12 months; owner cannot give full attention; Kodak and Rexall Agencies; small Optical connection; all prescribing doctors in the district; long lease given; no agents; price, lease and goodwill £600, stock and fixtures at valuation. 156/4, Office of this Paper.

NET Income £6 weekly: turnover £1,125, increasing; stock £450; fixtures, goodwill, lease (eight years), growing Proprietary, £650 all at; lock-up pharmacy; good-class trade; unopposed; four miles village; population 4,000; suit young, single; make money; lady or elderly semi-retire; health sole reason sale. "Chemicus," 173/160, Office of this Paper.

SPLENDID Village Chemist's for Sale; established 30 years; no other chemist's; death cause of sale; £350, stock, goodwill and fittings. Apply H. Sweeney & Son, New Road, Portsmouth.

£400.—SUIT youngster; no opposition; industrial; near Swansea. Full particulars, 155/22, Office of this Paper.

PARTNERSHIPS.

ASSISTANT, unqualified, age 34, tall and of good appearance, desires post with Chemist commencing or extending business; would go anywhere England or abroad and perform any duties; has £200 to invest in business; free about August; good prospects essential. 154/32, Office of this Paper.

PARTNERSHIP wanted in good, sound Dispensing Business; must bear thorough investigation; Lancashire or North Midlands; or would purchase outright; capital available about £800; banker's and solicitor's references exchanged. 156/30, Office of this Paper.

PREMISES FOR SALE.

BROADWAY PARADE, HAYES, MIDDLESEX.—Shops for Sale or Lease in this district of exceptional development; good opening for Chemist and Druggist; small deposit; balance on mortgage, repayable on easy terms. Apply Perrys (Ealing), Ltd., 16 Uxbridge Road, Ealing, W.5.

PREMISES TO LET.

6s. for 50 words or less; 6d. for every additional 10 words or less, prepaid.

GOLDERS GREEN (opposite Tube Station).—Lock-up Shop, with room in rear, in a busy position, to be Let on lease at £250 per annum; small premium; specially suitable for Chemist. Apply Hillier, Parker, May & Rowden, 27 Maddox Street, London, W.1.

SHEFFIELD.—Well-lighted Shop, just reconstructed, on two floors; 1,500 sq. ft.; centre of City; prominent thoroughfare; opposite new "Daily Mail" building; suit good Wholesale or Retail business, particularly Chemist, Cafe, Antiques, Tailor, Boots, Hardware, Dyer and Cleaner, Draper, etc.; rent £275. J. Bright & Co., 35 Norfolk Street, Sheffield.

VICTORIA.—Excellent opening for Chemist. Lock-up Shop situated in a good position; frontage about 15 ft.; rent only £150 per annum. Apply Hillier, Parker, May & Rowden, 27 Maddox Street, London, W.1.

THE terrace of Freehold Shops situated in a most central and important position at the junction of Boston Road and Uxbridge Road, Hanwell, W.7, is almost completed, and shops are now available for renting or purchase. Particulars from the building owners, R.C.H., Ltd., 2 Robert Street, Adelphi, London, W.C.2.

SITUATIONS OPEN.

RETAIL (HOME).

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

ACCRINGTON.—Qualified Junior, either sex, preferably with D. & P. experience, but not essential. Furnish usual particulars and state salary required. Snell, Chemist, Accrington.

BRISTOL.—Qualified Manager required for steady but good-class business; must be good Window-dresser, quick and correct Dispenser. Give full particulars in first letter to W. E. Partridge, 109 Coldharbour Road, Bristol. Also Locum Tenens required from August 4 to 18.

LIVERPOOL.—Qualified; at once; working-class district; Kodak; N.H.I.; assistant and apprentice kept. Please state age, height, salary required, and references to Banuer's, 265 Smithdown Lane, Liverpool.

LONDON, N.—Unqualified Assistant, not over 25 years of age, for holiday relief from July 25 to August 23 inclusive. Apply, with full particulars *re* experience, references and wages expected, to Nicoll, 110 Copenhagen Street Islington, N.1.

LONDON, E.—Qualified Assistant wanted, end of July; permanency; good all-round experience and first-class references essential; capable of taking charge; good opportunity for suitable applicant. Apply, giving full particulars, 155/34, Office of this Paper.

MANCHESTER.—Reliable Counter Assistant required for high-class City business; must be good Salesman and accustomed to high-class business. State experience, age, salary, etc. (in confidence), to 155/19, Office of this Paper.

LONDON, W.C.—Qualified Locum required for about five weeks, commencing July 14. Send full particulars, experience, age, salary required, etc. P.C.B. 65/2, Office of this Paper.

SOUTH DEVON COAST.—Young Junior for Stock-keeping (store and shop), also assist Counter; no dispensing. Send photo, recent references, state when disengaged, and salary required. 156/10, Office of this Paper.

WOKING.—Wanted, an unqualified Assistant, chiefly for Dispensing, in good-class Dispensing business. Apply, stating salary, experience, etc., to A. Lloyd Davies, Chemist, 2 High Street, Woking.

CHEMIST-OPTICIAN, J.C.Q.O. registered, as Chemist's Assistant and in charge of Optics; country business near London; must be experienced Optician. State age, qualifications, optical and pharmacy experience, references, married or single, salary required, when disengaged, to Relph, Chemist, Stevenage.

PHOTOGRAPHS, TESTIMONIALS, &c.

When answering advertisements in this section applicants are strongly advised not to send (unless specially requested) ORIGINAL TESTIMONIALS or VALUABLE PHOTOGRAPHS. As can be readily understood, when an advertiser receives from 60 to 100 replies the task of returning photographs, testimonials, &c., is one of some difficulty.

JUNIOR wanted; just out of apprenticeship preferred. Apply, giving full particulars, to Charles Saunders, 50 High Street, Highgate, N.6.

JUNIOR Assistant or Improver wanted for good Dispensing business. Apply, stating age, salary required, previous experience. R. J. Shepherd, Chemist, Gloucester.

JUNIOR unqualified Assistant wanted at once; Salesmanship essential; age 18 to 22. Apply personally after 2 p.m., Hancock & Co., Ltd., Chemists, 144 Fleet Street, London, E.C.4.

LOCUM.—Qualified gentleman required for small branch in working-class district; small N.H.I.; suit young pharmacist just through; July 28 to August 9 inclusive. Needham, "Fairleigh," Manor, Sheffield.

MANAGER required for Light Retail and N.H.I. business; age not less than 25 years. State full particulars of experience, salary required, etc., to Sharrow Pharmacy, Ltd., 154 Cemetery Road, Sheffield.

REQUIRED, qualified Chemist and Optician (J.C.Q.O.), also two unqualified Assistants (male). Apply, by letter only, to General Manager, London Co-operative Society, Ltd., 54 Maryland Street, Stratford, E.15, stating full particulars as to age, salary required, and experience, also when disengaged. Application to be marked "Pharmacy."

SALESWOMAN wanted, with good Store experience of Drug and Perfumery Departments; age 22 to 26; excellent prospects for ambitious person with the necessary experience and capable of exercising control over staff. When applying state age and details of experience. Applications treated in confidence. 156/5, Office of this Paper.

TAYLORS CASH CHEMISTS require two Managers for London and a seaside resort; applicants must possess up-to-date ideas on Display and Salesmanship. Apply (by letter only) to 8 Guilford Street, W.C.1, giving full details of experience, age, height, salary expected, and when at liberty. Bonus and commission offered to suitable applicants.

TIMOTHY WHITES (1928), LTD., have vacancies for unqualified Assistants. Write, giving full particulars of experience, etc., to Assistant Secretary, Timothy Whites (1928), Ltd., Chemists, Portsmouth.

TIMOTHY WHITES are about to open more new branches, and require really capable qualified Managers with previous experience of management; applicants must be energetic and have good organising ability; good salaries; commission; free removal. Send full particulars to Assistant Secretary, Timothy Whites (1928), Ltd., Chemists, Portsmouth.

UNQUALIFIED Assistant, till October, for brisk Retail, Photography and Dispensing. Full particulars as to age, height, references, salary required, and if possible photo, to F. R. Hill, Ltd., Chemists, 90 High Street, Gorleston-on-Sea.

YOUNG, qualified, good Window-dresser, for branch shop; salary and commission; interview. Send particulars of experience. Towle, Chemist, Northfield, Birmingham.

YOUNG lady for Fancy, Perfumery and Packed Drugs; 9 to 7, 1 o'clock Thursdays. Particulars, wages, etc., H. Robinson, 96 Marchmont Street, W.C.1.

WHOLESALE.

6s. for 40 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

REPRESENTATIVES, (1) Midlands, (2) S.W. England and Wales, calling upon Chemists, Hairdressers and Departmental Stores, to carry two new quick-selling Perfumery Preparations as side lines; commission only; £5 to £6 a week easily earned. Only men with good connections and whose records will stand investigation are asked to apply, stating age, experience, district and present firms (in confidence), to Box 96, C. Vernon & Sons, Ltd., 33 Holborn Viaduct, E.C.1.

REPRESENTATIVE, country, wanted by London Wholesale Druggists. Reply, giving full particulars of experience, etc., to "Galen," 171/102, Office of this Paper.

REQUIRED, gentleman of good address and education, with high-class connection amongst Hairdressers, Perfumers and Departmental Stores, to carry, on commission, selection of very exclusive Beauty-aids; retail only. Write details of ground covered to 173/161, Office of this Paper.

SALESMEN WANTED.—Salesmen in every part of British Isles, calling on Chemists, Hairdressers, Perfumers, are offered profitable side line; commission only. Write Mr. Ernest Rohner, 91 Regent Street, London, W.1.

WHOLESALE.—Unqualified Assistant wanted for Manchester Warehouse; good knowledge of Wets and Drys essential. Give full particulars, age, wages required, etc. 156/36, Office of this Paper.

SITUATIONS WANTED.

RETAIL (HOME).

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

A.A.A.—LOCUM, qualified, 28, has vacant dates in July; experienced and well recommended. Write to 9 St. Michael's Road, Cricklewood, N.W.2, or 'phone Shepherd's Bush 2199.

A.—QUALIFIED; Scot; 23; tall; good appearance; N.H.I. Dispensing and Counter, Photography; London district; excellent references. 156/7, Office of this Paper.

A LOCUM; qualified; M.P.S.; long experienced in all branches; excellent references; terms moderate. "S. C. J.," 54 Priory Road, West Hampstead, N.W.6.

ASSISTANT, 25, unqualified, desires permanent situation; well experienced in Dispensing, Counter and Photography; energetic, willing, and smart appearance; able to manage. Write B.M./SSPQ, London, W.C.1.

ASSISTANT, 24, unqualified, requires situation from about 21 July 21 to end of September; high-class Dispensing and Counter; Bristol or Weston-super-Mare district preferred. Winsor, Reading House, Clevedon.

ASSISTANT; 30; unqualified; 11 years' experience; permanency; disengaged; willing; good references. Reed, 28 Belmont Road, Brislington, Bristol.

ASSISTANT; capable Dispenser and Salesman; Photography; single; middle-aged; unqualified. "Statim," c/o Miss Drewery, 315 Newark Road, Bracebridge, Lincoln.

COMPETENT, experienced Assistant; unqualified; Public School; season or permanent; 25; height 6 ft.; active and energetic; recommended as honest, sober, reliable; disengaged. Flatman, Hanley Swan, Worcs.

EXPERIENCED lady Dispenser (Hall); post Doctor, Chemist, Institution; good Saleswoman, Nurse, Book-keeper. Westbourne Lodge, Harold Road, Clacton-on-Sea.

EXPERIENCED, qualified Manager, married, desires change; seaside or large town; 10 years' London branch management; 3 years present post; South-West England preferred. "Chemist," 39 Queen Street, Newton Abbot, Devon.

EXPERIENCED Assistant; tall; unqualified; middle-aged; first-class Dispensing, Counter, Photo; quick, clean, accurate; business builder; disengaged; permanency. Johnstone, 48 Bushey Grove Road, Watford.

JUNIOR; unqualified (lady); disengaged; Counter, Dispensing, light Photographic, Window-dressing; references; London preferred, but not essential. Write "Digitalis," 155/29, Office of this Paper.

LADY (Hall), with good London Retail and Hospital experience, requires position; Locum or permanency; pharmacy trained; London district; disengaged. "P.," 22 Stafford Street, Longton, Staffs.

LADY, Scot, qualified 1918, seeks post, Doctor or Institution; Retail and Hospital experience; capable; open for engagement. 155/28, Office of this Paper.

NAMES AND ADDRESSES.

When sending advertisements for any of the sections in this Supplement, advertisers—as a guarantee of good faith and not necessarily for publication—should always give their names and addresses. It sometimes occurs that this rule is not followed and delay and disappointment ensues. Strict attention to this detail will be appreciated.

LOCUM; qualified (disposed own business); reliable; recommended; free July 7 to August 31; provinces, Western Counties, preferred. "Locum," c/o Attewell, Chemist, Stoke, Devonport.

LOCUM; unqualified; experienced; can manage; disengaged except between July 20 to 26. "Aspirin," 72 Tremadoc Road, Clapham, S.W.4.

LOCUM; disengaged July 1; Liverpool and district; experienced. "G. H.," 63 Pemberton Road, Old Swan, Liverpool.

LOCUM; qualified; competent; reliable; disengaged July 27 for fortnight and after August 24. Jones, 57 Brown Road, Walthamstow, E.17.

YOUNG, qualified, engaged in London, desires change; Somerset, Wilts or Glos.; medium or working-class; accustomed to busy Counter and Panel; willing worker. "Belladonna," 149/1, Office of this Paper.

YOUNG, qualified, desires change; present post 10 months; high-class experience; good appearance; free one month. "M.P.S.," 34 Church Road, Epsom.

YOUNG lady; qualified; 10 years' experience, Retail and Dispensing, Photography, etc.; excellent references; Locum for season preferred; London district or South Coast. V. Evans, 11 Chepbourne Road, Bexhill-on-Sea, Sussex.

49 BIRTHDAYS; 27 years' M.P.S.; wholesale apprenticeship; physically 30; abstainer; F.B.O.A. and J.C.Q.O.; own optical equipment; expert in D. & P., Dispensing, Prescribing, Agricultural Pharmacy and Manufacture, packing and marketing own proprietaries; South or West Coast; near sea; 7 guineas with house or 8 guineas without minimum. 155/33, Office of this Paper.

WHOLESALE.

2s. for 18 words or less; 6d. for every additional 10 words or less, prepaid.

The ADVERTISER may if preferred have replies addressed to this Office, and forwarded on payment of an additional charge of 1/-.

A1 SALESMAN, age 38, having 10 years' connection Greater London district, also experience sales management, open to carry first-class line, Proprietary, Perfumery, Surgical Sundries or Toilet Requisites; own car; excellent references; salary, commission and part expenses. 156/12, Office of this Paper.

PHARMACIST, 33, 6 years' Retail Managership and Buyer for all branches of the business, possessing initiative, creative ability and sound judgment, seeks an administrative post with reputed manufacturing concern; highest references. 154/270, Office of this Paper.

SOAP, PERFUMERY, ETC.—Salesman of ability, live connection, Wholesale and Retail, Lancashire, Yorkshire, open for offers. 173/159, Office of this Paper.

We desire particularly to draw the attention of Colonial and Foreign Subscribers to the fact that in cases where they require partners, agents or assistants, or wish to sell their businesses, an Advertisement in this Supplement, placed in every copy of "The Chemist and Druggist," should be the readiest means of helping them to attain their object. The tariff for such announcements is given under the appropriate headings in the Supplement. Instructions and remittances can be sent to us direct or through the advertisers' correspondents in this country.

(COLONIAL, INDIAN AND FOREIGN.)

INDIA, ETC.—Well-known Representative, with wide knowledge of India, Burma and Ceylon, now open to engagement; personally known to all principal Chemists, Importers of Essences, Essential Oils, Perfumery, Toilet Preparations, etc.; terms by arrangement; can interview anywhere. 156/15, Office of this Paper.

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CHEMISTS' FITTINGS.—Silent Salesman Cases, Drugfittings, Wallcases, Dispensing Screens, glass-front Counters, Perfume Cases, Window Enclosures, Glass Shelves, Mirrors, Counter Drawers. Before you decide send to GEORGE COOK, the well-known Chemists' Fitter, 27 Macclesfield Street, City Road, London, E.C.1. 40 years' experience.

FOR quick sale, two heavy Werner Jacketted Mixers, in excellent condition. Write 172/142, Office of this Paper.

FOR Sale, Cylindrical and also "U"-shaped Drying Machines with Agitators. Write 172/143, Office of this Paper.

FOR Sale, Single Pot and Donble Pot Ball Grinding Mill, also Tube Filling Machine. Write 172/144, Office of this Paper.

FOR Sale, Vertical Stone Mill, also Grinder with screens (Perplex type). Write 172/145, Office of this Paper.

FOR immediate disposal, Alsing type Ball Mill, Silex lined; also C.I. Ball Mill. Write 172/146, Office of this Paper.

ONE "Gardner's" Patent Combined Fine Powder Dresser, Sprayer and Mixer with antomatic feeder, together with shafting, wall bracket and bearings, pulleys, belt striking gear, etc., fitted with a one hundred and twenty mesh silk sieve; hardly used; condition perfect; inspection invited; price £100. Write 156/16, Office of this Paper.

SHOPFITTINGS, NEW OR SECOND-HAND.—In stock and ready for immediate despatch. Forward us the sizes of your pharmacy and we will quote by return of post. Write or call, PHILIP JOSEPHS & SONS, LTD., 90/92 St. John Street, Clerkenwell, London, E.C.1. "Pharmacy Fitters for over a Century."

£62 FOR SET OF CHEMIST'S FITTINGS.—8 ft. Drug Fitting, fitted 16 drawers with glass labels and knobs, 10 ft. glass front Counter, 6 ft. Dispensing Screen, Perfumery Case and Desk and Cash Till. Full particulars on request. Always a good selection of Silent Salesmen, Counters, Wall Cases, etc., in stock. F. MAUND & E. BERG (SHOWCASES), LTD., 175/9 and 336 Old Street, London, E.C.1.

£67 10s. FOR PHARMACY FIXTURES, comprising Drug Fixture, Counter with mirror-lined showcase front, fitted at back two rows of drawers, Wall Case, Dispensing Screen fitted three mirror-back show cases, Silent Salesman with three plate-glass shelves, Gledhill Till. Call or write, RUDDUCK & CO., 219 Old Street, London, E.C.1.

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2d. per word: Minimum 2s.

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TWO SECOND-HAND CARBOYS. Hickmotts, Chemists, Rainham, Kent.

GOWER, Chemists' Bookseller, 41 Voltaire Road, Clapham, wants Pharmaceutical Books, including B.P., Pharmaceutical Formulas, B.P.C., P.J.F., Optical Books, Materia Medica Collections.

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S. E. HACKETT, 23 July Road, Liverpool

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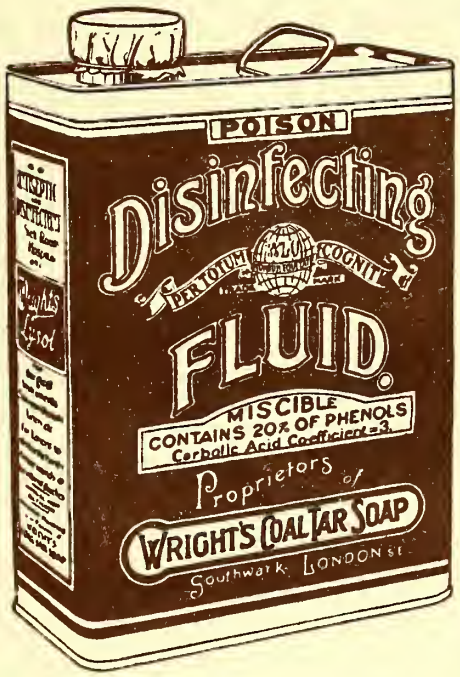
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